

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

Assumptions for shadow calculations

Maximum distance for influence	1,500 m
Minimum sun height over horizon for influence	3 °
Day step for calculation	1 days
Time step for calculation	1 minutes

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational hours are calculated from WTGs in calculation and wind distribution:

2314 Provided

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:

Height contours used: Height Contours: 160310_Westwood_RedPine_10ftHCLsFr

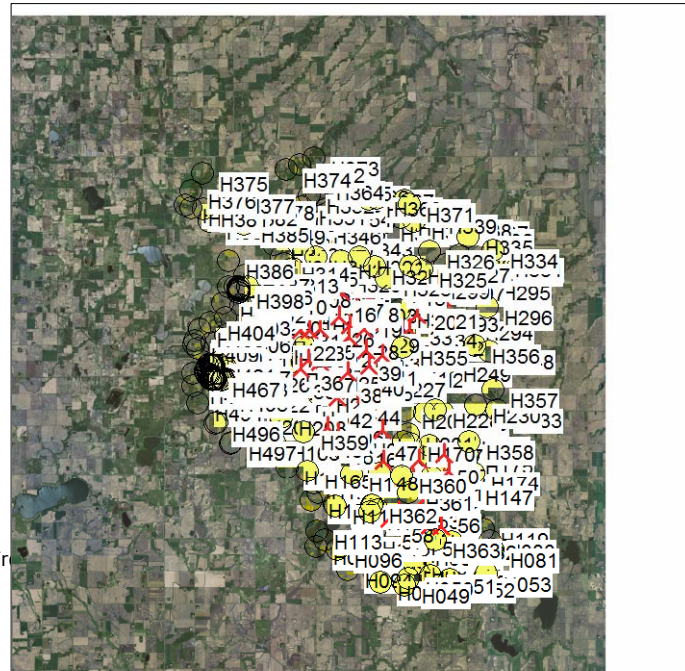
Obstacles used in calculation

Eye height: 1.5 m

Grid resolution: 10.0 m

All coordinates are in

UTM (north)-NAD83 (US+CA) Zone: 14



Scale 1:400,000

▲ New WTG

● Shadow receptor

WTGs

	Easting	Northing	Z [m]	Row data/Description	WTG type							
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]	
1	725,271	4,933,999	463.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
2	725,246	4,935,533	457.2	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
3	726,500	4,935,150	451.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
4	722,484	4,934,413	489.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
5	723,021	4,934,242	493.8	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
6	723,577	4,934,672	475.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
7	723,285	4,933,740	493.2	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
8	725,028	4,934,669	463.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
9	724,688	4,933,681	471.8	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
10	724,520	4,932,922	476.4	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
11	726,156	4,933,178	463.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
12	726,185	4,932,052	469.4	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
13	727,600	4,932,700	460.2	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
14	728,352	4,932,085	460.2	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
15	729,150	4,932,000	457.0	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
16	725,486	4,931,023	483.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
17	725,877	4,931,258	477.0	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
18	726,717	4,931,064	474.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
19	726,918	4,930,333	477.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
20	729,835	4,930,832	460.2	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
21	730,927	4,930,874	450.7	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
22	723,442	4,929,043	499.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
23	723,903	4,929,064	491.6	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
24	726,002	4,929,389	485.0	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
25	724,426	4,929,138	494.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
26	725,426	4,929,798	481.6	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
27	725,962	4,928,810	493.8	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	
28	726,808	4,929,221	481.6	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1	

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SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

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	Easting	Northing	Z [m]	Row data/Description	WTG type			Rotor diameter [m]	Hub height [m]	RPM [RPM]	
					Valid	Manufact.	Type-generator				
29	727,866	4,929,612	475.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
30	728,535	4,928,722	474.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
31	728,820	4,929,124	475.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
32	729,218	4,929,285	472.4	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
33	729,581	4,930,015	469.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
34	730,936	4,929,953	454.2	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
35	723,461	4,927,126	509.0	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
36	723,892	4,927,605	503.3	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
37	724,509	4,927,520	498.9	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
38	726,002	4,927,040	496.8	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
39	726,922	4,928,172	487.7	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
40	727,114	4,927,422	493.8	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
41	727,806	4,927,947	484.6	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
42	725,459	4,925,756	509.0	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
43	726,200	4,926,150	503.6	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
44	726,950	4,925,950	506.7	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
45	724,995	4,924,279	509.0	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
46	725,576	4,923,958	509.0	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
47	727,954	4,924,228	491.9	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
48	728,044	4,922,701	490.7	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
49	729,950	4,922,800	490.7	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
50	731,274	4,923,176	490.7	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
51	731,550	4,922,300	493.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
52	729,666	4,921,841	498.1	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
53	730,316	4,920,862	496.8	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
54	730,695	4,921,129	496.7	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
55	731,300	4,921,900	505.4	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
56	731,375	4,920,700	487.7	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
57	728,462	4,919,806	502.9	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
58	728,966	4,920,169	500.5	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
59	730,597	4,919,550	506.0	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1
60	731,227	4,919,507	504.8	Primary	Yes	VESTAS	V117-3.3-3,300	3,300	117.0	80.0	13.1

Shadow receptor-Input

No.	Name	Easting	Northing	Z	Width	Height	Height	Degrees from	Slope of	Direction mode
				[m]	[m]	[m]	a.g.l.	south cw	window	
				[m]	[m]	[m]	[m]	[°]	[°]	
H048	H048	728,115	4,916,639	516.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H049	H049	729,402	4,916,508	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H050	H050	729,569	4,916,874	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H051	H051	730,735	4,917,064	503.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H052	H052	731,794	4,916,898	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H053	H053	733,740	4,917,275	503.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H080	H080	733,892	4,918,871	496.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H081	H081	734,062	4,918,455	492.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H082	H082	731,822	4,918,771	504.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H083	H083	731,969	4,917,306	501.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H084	H084	731,115	4,917,750	504.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H085	H085	730,996	4,918,554	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H086	H086	730,055	4,918,409	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H087	H087	729,859	4,917,612	504.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H088	H088	729,346	4,918,466	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H090	H090	729,379	4,917,669	504.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H091	H091	728,270	4,918,198	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H092	H092	727,660	4,918,585	507.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H093	H093	727,196	4,918,680	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H094	H094	726,328	4,917,193	508.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H095	H095	725,053	4,918,637	503.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

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No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H096	H096	725,749	4,918,172	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H097	H097	724,605	4,918,290	505.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H112	H112	725,564	4,920,316	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H113	H113	724,645	4,919,053	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H114	H114	727,408	4,920,113	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H115	H115	727,195	4,918,789	503.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H116	H116	727,808	4,920,191	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H117	H117	728,824	4,918,918	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H118	H118	729,840	4,919,722	506.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H119	H119	733,501	4,919,439	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H147	H147	732,601	4,921,545	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H148	H148	731,968	4,921,946	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H149	H149	730,978	4,921,525	490.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H150	H150	730,614	4,921,987	493.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H151	H151	728,411	4,920,456	492.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H152	H152	727,560	4,920,426	493.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H153	H153	725,920	4,921,900	505.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H154	H154	725,506	4,920,392	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H155	H155	724,610	4,920,935	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H156	H156	724,389	4,921,420	506.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H157	H157	724,262	4,920,563	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H161	H161	719,874	4,923,300	527.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H163	H163	722,237	4,923,405	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H165	H165	724,007	4,922,031	510.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H166	H166	722,929	4,922,208	512.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H167	H167	725,905	4,923,197	505.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H168	H168	726,376	4,921,996	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H169	H169	727,888	4,922,075	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H170	H170	729,447	4,923,620	485.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H171	H171	730,476	4,923,553	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H172	H172	730,448	4,922,958	484.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H173	H173	730,945	4,922,563	494.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H174	H174	732,896	4,922,239	494.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H175	H175	732,529	4,923,110	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H198	H198	732,299	4,924,009	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H199	H199	731,149	4,925,228	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H200	H200	730,170	4,925,171	494.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H201	H201	729,315	4,924,087	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H202	H202	729,062	4,925,235	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H203	H203	729,073	4,923,692	480.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H204	H204	726,516	4,923,705	496.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H206	H206	724,535	4,924,268	514.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H207	H207	723,763	4,925,198	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H208	H208	722,520	4,924,652	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H209	H209	720,913	4,924,651	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H210	H210	719,507	4,926,626	512.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H211	H211	719,523	4,926,471	514.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H212	H212	719,508	4,926,363	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H213	H213	719,505	4,926,222	515.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H214	H214	719,520	4,925,949	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H215	H215	719,559	4,925,707	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H217	H217	720,364	4,926,560	506.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H220	H220	721,714	4,926,403	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H221	H221	721,151	4,925,769	501.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H222	H222	724,090	4,926,435	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H224	H224	724,495	4,925,892	497.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H225	H225	727,070	4,926,781	494.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H226	H226	726,032	4,926,532	502.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H227	H227	727,725	4,926,770	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

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No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H228	H228	730,741	4,925,336	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H230	H230	732,867	4,925,647	469.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H233	H233	733,996	4,925,469	453.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H248	H248	733,466	4,928,352	430.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H249	H249	731,198	4,927,668	473.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H250	H250	729,945	4,927,311	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H251	H251	727,868	4,927,277	486.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H252	H252	727,174	4,926,976	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H253	H253	726,136	4,928,157	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H254	H254	725,409	4,926,953	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H255	H255	724,906	4,926,938	505.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H257	H257	723,631	4,928,266	501.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H258	H258	722,827	4,927,341	502.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H259	H259	722,426	4,928,074	502.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H260	H260	722,146	4,928,204	507.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H261	H261	721,153	4,926,772	500.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H262	H262	720,658	4,927,958	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H278	H278	720,561	4,928,494	507.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H279	H279	720,947	4,929,553	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H280	H280	721,059	4,929,572	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H281	H281	722,112	4,928,971	502.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H282	H282	722,047	4,929,705	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H283	H283	722,783	4,929,036	500.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H284	H284	723,329	4,929,926	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H285	H285	724,173	4,929,776	495.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H286	H286	724,573	4,928,599	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H287	H287	726,685	4,928,739	479.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H288	H288	725,925	4,929,877	478.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H289	H289	727,931	4,928,837	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H292	H292	729,748	4,928,899	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H293	H293	730,428	4,930,100	457.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H294	H294	732,309	4,929,759	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H295	H295	733,156	4,931,801	423.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H296	H296	733,299	4,930,528	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H297	H297	730,732	4,931,660	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H299	H299	729,943	4,931,746	451.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H300	H300	728,657	4,930,240	468.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H301	H301	727,843	4,931,649	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H302	H302	728,688	4,931,663	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H303	H303	726,149	4,930,379	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H305	H305	724,247	4,930,703	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H307	H307	723,993	4,931,431	483.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H308	H308	722,594	4,931,039	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H309	H309	722,171	4,931,027	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H310	H310	721,293	4,930,646	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H311	H311	721,574	4,931,459	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H312	H312	720,950	4,931,718	506.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H313	H313	721,869	4,931,720	506.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H314	H314	722,445	4,932,328	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H315	H315	722,907	4,932,108	484.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H316	H316	722,291	4,932,632	478.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H317	H317	723,428	4,932,915	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H318	H318	724,132	4,932,703	476.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H319	H319	725,462	4,932,557	465.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H320	H320	725,235	4,931,900	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H321	H321	726,401	4,932,818	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H322	H322	727,242	4,932,330	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H323	H323	727,883	4,931,792	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H324	H324	729,140	4,932,472	451.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H325	H325	729,778	4,932,315	448.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H326	H326	730,143	4,933,232	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H327	H327	730,991	4,932,569	435.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H328	H328	731,748	4,933,066	426.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H330	H330	733,715	4,932,788	410.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H331	H331	733,786	4,932,965	411.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H334	H334	733,512	4,933,404	403.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H335	H335	732,170	4,934,010	415.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H336	H336	732,168	4,934,316	405.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H337	H337	731,900	4,934,701	410.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H338	H338	731,026	4,934,775	415.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H339	H339	730,162	4,934,981	423.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H340	H340	729,245	4,934,684	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H341	H341	728,538	4,934,833	436.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H342	H342	727,624	4,934,523	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H343	H343	725,770	4,933,628	460.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H345	H345	724,138	4,933,926	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H346	H346	724,049	4,934,248	467.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H347	H347	723,930	4,933,727	474.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H348	H348	721,813	4,933,283	475.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H349	H349	721,098	4,934,128	483.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H350	H350	721,670	4,934,790	486.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H351	H351	723,260	4,935,189	469.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H352	H352	723,642	4,935,778	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H353	H353	724,065	4,935,805	460.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H354	H354	724,602	4,935,135	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H355	H355	728,849	4,928,393	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H356	H356	732,723	4,928,604	421.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H357	H357	733,778	4,926,437	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H358	H358	732,570	4,923,836	473.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H359	H359	723,754	4,924,013	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H360	H360	729,031	4,921,984	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H361	H361	729,422	4,921,135	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H362	H362	727,502	4,920,433	493.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H363	H363	730,944	4,918,814	507.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H364	H364	724,155	4,936,433	454.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H365	H365	724,528	4,936,423	453.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H366	H366	725,463	4,936,235	451.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H367	H367	726,789	4,936,117	441.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H368	H368	726,834	4,935,674	444.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H369	H369	727,227	4,935,749	439.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H370	H370	728,722	4,935,700	431.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H371	H371	728,990	4,935,533	424.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H372	H372	723,087	4,937,254	432.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H373	H373	723,847	4,937,637	429.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H374	H374	722,400	4,937,023	442.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H375	H375	717,939	4,936,666	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H376	H376	717,348	4,935,787	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H377	H377	719,427	4,935,624	483.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H378	H378	720,478	4,935,343	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H379	H379	717,052	4,935,051	491.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H380	H380	717,361	4,934,918	490.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H381	H381	718,033	4,934,915	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H382	H382	719,570	4,934,987	483.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H383	H383	718,939	4,934,649	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H384	H384	718,363	4,934,282	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H385	H385	720,227	4,934,216	473.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H386	H386	719,469	4,932,351	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H387	H387	720,374	4,931,680	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H388	H388	719,527	4,931,060	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H389	H389	719,883	4,931,108	502.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H390	H390	720,045	4,931,077	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H391	H391	720,045	4,931,054	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H392	H392	720,043	4,931,025	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H393	H393	720,047	4,930,997	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H394	H394	720,058	4,930,934	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H395	H395	720,050	4,931,112	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H396	H396	720,520	4,931,120	505.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H397	H397	720,056	4,930,918	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H398	H398	720,056	4,930,883	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H399	H399	720,026	4,930,818	502.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H400	H400	720,090	4,930,817	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H401	H401	719,212	4,930,271	506.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H402	H402	720,196	4,930,196	501.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H403	H403	719,426	4,929,541	503.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H404	H404	718,603	4,929,272	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H405	H405	718,065	4,928,934	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H406	H406	719,426	4,928,658	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H407	H407	718,741	4,928,291	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H408	H408	717,825	4,928,342	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H409	H409	717,737	4,928,130	506.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H410	H410	717,968	4,927,972	503.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H411	H411	719,345	4,927,841	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H412	H412	718,640	4,927,210	509.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H413	H413	718,674	4,927,202	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H414	H414	718,719	4,927,194	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H415	H415	718,746	4,927,190	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H416	H416	718,650	4,927,138	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H417	H417	718,524	4,927,140	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H418	H418	718,773	4,927,185	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H419	H419	718,717	4,927,134	511.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H420	H420	718,719	4,927,122	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H421	H421	718,649	4,927,122	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H422	H422	718,762	4,927,140	510.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H423	H423	718,760	4,927,123	511.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H424	H424	718,831	4,927,126	509.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H425	H425	718,888	4,927,123	508.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H426	H426	719,017	4,927,257	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H427	H427	719,468	4,927,074	503.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H428	H428	719,572	4,926,856	509.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H429	H429	719,530	4,926,789	512.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H430	H430	719,534	4,926,763	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H431	H431	719,490	4,926,738	512.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H432	H432	719,408	4,926,829	509.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H433	H433	719,403	4,926,777	510.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H434	H434	719,380	4,926,829	509.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H435	H435	719,399	4,926,968	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H436	H436	719,399	4,926,945	506.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H437	H437	719,377	4,927,021	505.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H438	H438	719,351	4,927,025	505.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H439	H439	719,328	4,927,030	505.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H440	H440	719,234	4,927,054	507.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H441	H441	719,169	4,927,074	507.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H442	H442	719,070	4,927,094	507.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H443	H443	718,996	4,927,108	507.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H444	H444	718,923	4,927,121	507.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H445	H445	718,421	4,926,841	509.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H446	H446	718,434	4,926,862	510.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H447	H447	718,493	4,926,914	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H448	H448	718,492	4,926,941	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H449	H449	718,495	4,926,956	513.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H450	H450	718,491	4,927,025	513.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H451	H451	718,426	4,926,767	510.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H452	H452	717,742	4,926,689	510.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H453	H453	718,452	4,926,708	511.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H454	H454	718,493	4,926,708	512.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H455	H455	718,554	4,926,754	514.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H456	H456	718,619	4,926,695	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H457	H457	718,680	4,926,647	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H458	H458	718,731	4,926,613	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H459	H459	718,735	4,926,591	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H460	H460	718,736	4,926,532	514.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H461	H461	718,737	4,926,501	514.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H462	H462	718,738	4,926,469	513.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H463	H463	718,669	4,926,475	514.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H464	H464	718,782	4,926,469	513.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H465	H465	718,848	4,926,463	513.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H466	H466	718,896	4,926,471	513.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H467	H467	718,961	4,926,477	512.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H468	H468	719,015	4,926,468	512.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H469	H469	719,076	4,926,472	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H470	H470	719,121	4,926,477	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H471	H471	719,215	4,926,502	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H472	H472	719,307	4,926,427	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H473	H473	719,352	4,926,461	514.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H474	H474	719,383	4,926,461	514.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H475	H475	719,464	4,926,375	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H476	H476	719,576	4,926,416	514.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H477	H477	719,566	4,926,470	514.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H478	H478	719,535	4,926,339	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H479	H479	719,536	4,926,309	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H480	H480	719,536	4,926,284	515.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H481	H481	719,537	4,926,259	515.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H482	H482	719,541	4,926,230	515.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H483	H483	719,534	4,926,180	516.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H484	H484	719,544	4,925,995	518.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H485	H485	719,511	4,926,019	517.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H486	H486	719,492	4,926,169	516.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H487	H487	719,477	4,926,230	516.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H488	H488	719,487	4,926,336	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H489	H489	719,102	4,926,261	515.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H490	H490	719,043	4,926,243	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H491	H491	719,175	4,926,227	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H492	H492	717,799	4,926,069	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H493	H493	719,379	4,925,767	520.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H494	H494	718,045	4,925,241	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H495	H495	719,130	4,924,317	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H496	H496	719,026	4,924,271	523.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H497	H497	719,904	4,923,356	529.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

Project:

20162030 Westwood Red Pine

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 Jay Haley / jhaley@eapc.net
 Calculated:
 6/24/2016 2:04 PM/3.0.654

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

Calculation Results

Shadow receptor

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H048	H048	0:00	0	0:00	0:00
H049	H049	0:00	0	0:00	0:00
H050	H050	0:00	0	0:00	0:00
H051	H051	0:00	0	0:00	0:00
H052	H052	0:00	0	0:00	0:00
H053	H053	0:00	0	0:00	0:00
H080	H080	0:00	0	0:00	0:00
H081	H081	0:00	0	0:00	0:00
H082	H082	0:00	0	0:00	0:00
H083	H083	0:00	0	0:00	0:00
H084	H084	0:00	0	0:00	0:00
H085	H085	0:00	0	0:00	0:00
H086	H086	0:00	0	0:00	0:00
H087	H087	0:00	0	0:00	0:00
H088	H088	0:00	0	0:00	0:00
H090	H090	0:00	0	0:00	0:00
H091	H091	0:00	0	0:00	0:00
H092	H092	0:00	0	0:00	0:00
H093	H093	0:00	0	0:00	0:00
H094	H094	0:00	0	0:00	0:00
H095	H095	0:00	0	0:00	0:00
H096	H096	0:00	0	0:00	0:00
H097	H097	0:00	0	0:00	0:00
H112	H112	0:00	0	0:00	0:00
H113	H113	0:00	0	0:00	0:00
H114	H114	8:31	32	0:24	3:12
H115	H115	0:00	0	0:00	0:00
H116	H116	37:11	100	0:37	13:41
H117	H117	0:00	0	0:00	0:00
H118	H118	39:09	128	0:40	16:12
H119	H119	0:00	0	0:00	0:00
H147	H147	10:00	62	0:18	3:42
H148	H148	24:17	52	0:40	8:57
H149	H149	74:17	95	1:25	22:22
H150	H150	48:57	95	1:05	18:10
H151	H151	39:01	69	0:45	14:46
H152	H152	25:39	94	0:26	9:13
H153	H153	0:00	0	0:00	0:00
H154	H154	0:00	0	0:00	0:00
H155	H155	0:00	0	0:00	0:00
H156	H156	0:00	0	0:00	0:00
H157	H157	0:00	0	0:00	0:00
H161	H161	0:00	0	0:00	0:00
H163	H163	0:00	0	0:00	0:00
H165	H165	0:00	0	0:00	0:00
H166	H166	0:00	0	0:00	0:00
H167	H167	0:00	0	0:00	0:00
H168	H168	0:00	0	0:00	0:00
H169	H169	0:00	0	0:00	0:00
H170	H170	0:00	0	0:00	0:00
H171	H171	18:44	48	0:32	7:02
H172	H172	72:13	159	0:51	24:37
H173	H173	45:17	104	0:46	17:23
H174	H174	3:53	23	0:15	1:30
H175	H175	20:45	84	0:22	6:23
H198	H198	16:17	64	0:21	4:38
H199	H199	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H200	H200	0:00	0	0:00	0:00
H201	H201	3:57	24	0:15	1:34
H202	H202	3:21	22	0:12	0:53
H203	H203	19:38	78	0:23	8:54
H204	H204	16:27	50	0:29	6:58
H206	H206	63:58	109	0:58	24:21
H207	H207	0:00	0	0:00	0:00
H208	H208	0:00	0	0:00	0:00
H209	H209	0:00	0	0:00	0:00
H210	H210	0:00	0	0:00	0:00
H211	H211	0:00	0	0:00	0:00
H212	H212	0:00	0	0:00	0:00
H213	H213	0:00	0	0:00	0:00
H214	H214	0:00	0	0:00	0:00
H215	H215	0:00	0	0:00	0:00
H217	H217	0:00	0	0:00	0:00
H220	H220	0:00	0	0:00	0:00
H221	H221	0:00	0	0:00	0:00
H222	H222	0:00	0	0:00	0:00
H224	H224	11:20	35	0:28	4:17
H225	H225	26:03	99	0:26	8:47
H226	H226	16:11	65	0:26	5:50
H227	H227	2:11	16	0:11	0:34
H228	H228	0:00	0	0:00	0:00
H230	H230	0:00	0	0:00	0:00
H233	H233	0:00	0	0:00	0:00
H248	H248	0:00	0	0:00	0:00
H249	H249	0:00	0	0:00	0:00
H250	H250	0:00	0	0:00	0:00
H251	H251	24:36	56	0:36	10:13
H252	H252	21:41	82	0:22	6:43
H253	H253	30:21	92	0:33	11:08
H254	H254	35:03	64	0:46	12:58
H255	H255	10:10	48	0:20	3:52
H257	H257	5:58	27	0:17	2:01
H258	H258	36:56	91	0:41	14:00
H259	H259	0:00	0	0:00	0:00
H260	H260	0:00	0	0:00	0:00
H261	H261	0:00	0	0:00	0:00
H262	H262	0:00	0	0:00	0:00
H278	H278	0:00	0	0:00	0:00
H279	H279	0:00	0	0:00	0:00
H280	H280	0:00	0	0:00	0:00
H281	H281	3:55	22	0:15	1:27
H282	H282	0:00	0	0:00	0:00
H283	H283	26:03	54	0:41	9:48
H284	H284	9:39	48	0:15	3:23
H285	H285	14:12	57	0:23	4:12
H286	H286	16:23	76	0:22	7:03
H287	H287	38:50	110	0:38	15:06
H288	H288	81:28	183	0:53	29:28
H289	H289	68:14	168	0:44	25:25
H292	H292	19:12	72	0:28	7:42
H293	H293	64:18	135	0:51	23:34
H294	H294	4:35	25	0:16	1:52
H295	H295	0:00	0	0:00	0:00
H296	H296	0:00	0	0:00	0:00
H297	H297	14:35	46	0:23	4:01

To be continued on next page...

Project:

20162030 Westwood Red Pine

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 Calculated:
 6/24/2016 2:04 PM/3.0.654

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H299	H299	27:44	70	0:34	12:10
H300	H300	43:59	159	0:29	14:20
H301	H301	11:02	58	0:20	3:37
H302	H302	12:52	68	0:16	4:38
H303	H303	48:06	125	0:35	15:27
H305	H305	10:41	57	0:16	3:47
H307	H307	0:00	0	0:00	0:00
H308	H308	0:00	0	0:00	0:00
H309	H309	0:00	0	0:00	0:00
H310	H310	0:00	0	0:00	0:00
H311	H311	0:00	0	0:00	0:00
H312	H312	0:00	0	0:00	0:00
H313	H313	0:00	0	0:00	0:00
H314	H314	0:00	0	0:00	0:00
H315	H315	0:00	0	0:00	0:00
H316	H316	0:00	0	0:00	0:00
H317	H317	14:18	82	0:21	5:29
H318	H318	59:09	74	1:01	23:03
H319	H319	56:48	160	0:33	22:46
H320	H320	11:17	43	0:26	4:08
H321	H321	5:18	26	0:19	2:00
H322	H322	14:35	38	0:40	5:00
H323	H323	40:10	118	0:39	14:58
H324	H324	16:37	45	0:32	5:23
H325	H325	30:55	76	0:39	10:08
H326	H326	0:00	0	0:00	0:00
H327	H327	0:00	0	0:00	0:00
H328	H328	0:00	0	0:00	0:00
H330	H330	0:00	0	0:00	0:00
H331	H331	0:00	0	0:00	0:00
H334	H334	0:00	0	0:00	0:00
H335	H335	0:00	0	0:00	0:00
H336	H336	0:00	0	0:00	0:00
H337	H337	0:00	0	0:00	0:00
H338	H338	0:00	0	0:00	0:00
H339	H339	0:00	0	0:00	0:00
H340	H340	0:00	0	0:00	0:00
H341	H341	0:00	0	0:00	0:00
H342	H342	4:28	37	0:11	2:07
H343	H343	36:33	107	0:37	13:03
H345	H345	69:58	175	0:46	26:36
H346	H346	72:09	212	0:32	25:11
H347	H347	57:24	125	0:52	22:31
H348	H348	0:00	0	0:00	0:00
H349	H349	4:10	24	0:15	1:30
H350	H350	17:22	48	0:35	6:32
H351	H351	12:43	40	0:24	3:27
H352	H352	0:00	0	0:00	0:00
H353	H353	5:24	27	0:19	2:00
H354	H354	49:55	138	0:35	18:27
H355	H355	9:25	34	0:25	3:06
H356	H356	0:00	0	0:00	0:00
H357	H357	0:00	0	0:00	0:00
H358	H358	4:55	27	0:18	1:32
H359	H359	5:57	29	0:19	2:09
H360	H360	25:55	54	0:42	9:44
H361	H361	16:11	63	0:28	6:07
H362	H362	20:16	98	0:25	7:20

To be continued on next page...

Project:

20162030 Westwood Red Pine

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 Calculated:
 6/24/2016 2:04 PM/3.0.654

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Shadow, worst case			Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]	Shadow hours per year [h/year]
H363	H363	0:00	0	0:00	0:00	0:00
H364	H364	2:17	17	0:10	0:46	0:46
H365	H365	0:00	0	0:00	0:00	0:00
H366	H366	0:00	0	0:00	0:00	0:00
H367	H367	0:00	0	0:00	0:00	0:00
H368	H368	0:00	0	0:00	0:00	0:00
H369	H369	31:01	78	0:31	8:51	8:51
H370	H370	0:00	0	0:00	0:00	0:00
H371	H371	0:00	0	0:00	0:00	0:00
H372	H372	0:00	0	0:00	0:00	0:00
H373	H373	0:00	0	0:00	0:00	0:00
H374	H374	0:00	0	0:00	0:00	0:00
H375	H375	0:00	0	0:00	0:00	0:00
H376	H376	0:00	0	0:00	0:00	0:00
H377	H377	0:00	0	0:00	0:00	0:00
H378	H378	0:00	0	0:00	0:00	0:00
H379	H379	0:00	0	0:00	0:00	0:00
H380	H380	0:00	0	0:00	0:00	0:00
H381	H381	0:00	0	0:00	0:00	0:00
H382	H382	0:00	0	0:00	0:00	0:00
H383	H383	0:00	0	0:00	0:00	0:00
H384	H384	0:00	0	0:00	0:00	0:00
H385	H385	0:00	0	0:00	0:00	0:00
H386	H386	0:00	0	0:00	0:00	0:00
H387	H387	0:00	0	0:00	0:00	0:00
H388	H388	0:00	0	0:00	0:00	0:00
H389	H389	0:00	0	0:00	0:00	0:00
H390	H390	0:00	0	0:00	0:00	0:00
H391	H391	0:00	0	0:00	0:00	0:00
H392	H392	0:00	0	0:00	0:00	0:00
H393	H393	0:00	0	0:00	0:00	0:00
H394	H394	0:00	0	0:00	0:00	0:00
H395	H395	0:00	0	0:00	0:00	0:00
H396	H396	0:00	0	0:00	0:00	0:00
H397	H397	0:00	0	0:00	0:00	0:00
H398	H398	0:00	0	0:00	0:00	0:00
H399	H399	0:00	0	0:00	0:00	0:00
H400	H400	0:00	0	0:00	0:00	0:00
H401	H401	0:00	0	0:00	0:00	0:00
H402	H402	0:00	0	0:00	0:00	0:00
H403	H403	0:00	0	0:00	0:00	0:00
H404	H404	0:00	0	0:00	0:00	0:00
H405	H405	0:00	0	0:00	0:00	0:00
H406	H406	0:00	0	0:00	0:00	0:00
H407	H407	0:00	0	0:00	0:00	0:00
H408	H408	0:00	0	0:00	0:00	0:00
H409	H409	0:00	0	0:00	0:00	0:00
H410	H410	0:00	0	0:00	0:00	0:00
H411	H411	0:00	0	0:00	0:00	0:00
H412	H412	0:00	0	0:00	0:00	0:00
H413	H413	0:00	0	0:00	0:00	0:00
H414	H414	0:00	0	0:00	0:00	0:00
H415	H415	0:00	0	0:00	0:00	0:00
H416	H416	0:00	0	0:00	0:00	0:00
H417	H417	0:00	0	0:00	0:00	0:00
H418	H418	0:00	0	0:00	0:00	0:00
H419	H419	0:00	0	0:00	0:00	0:00
H420	H420	0:00	0	0:00	0:00	0:00

To be continued on next page...

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H421	H421	0:00	0	0:00	0:00
H422	H422	0:00	0	0:00	0:00
H423	H423	0:00	0	0:00	0:00
H424	H424	0:00	0	0:00	0:00
H425	H425	0:00	0	0:00	0:00
H426	H426	0:00	0	0:00	0:00
H427	H427	0:00	0	0:00	0:00
H428	H428	0:00	0	0:00	0:00
H429	H429	0:00	0	0:00	0:00
H430	H430	0:00	0	0:00	0:00
H431	H431	0:00	0	0:00	0:00
H432	H432	0:00	0	0:00	0:00
H433	H433	0:00	0	0:00	0:00
H434	H434	0:00	0	0:00	0:00
H435	H435	0:00	0	0:00	0:00
H436	H436	0:00	0	0:00	0:00
H437	H437	0:00	0	0:00	0:00
H438	H438	0:00	0	0:00	0:00
H439	H439	0:00	0	0:00	0:00
H440	H440	0:00	0	0:00	0:00
H441	H441	0:00	0	0:00	0:00
H442	H442	0:00	0	0:00	0:00
H443	H443	0:00	0	0:00	0:00
H444	H444	0:00	0	0:00	0:00
H445	H445	0:00	0	0:00	0:00
H446	H446	0:00	0	0:00	0:00
H447	H447	0:00	0	0:00	0:00
H448	H448	0:00	0	0:00	0:00
H449	H449	0:00	0	0:00	0:00
H450	H450	0:00	0	0:00	0:00
H451	H451	0:00	0	0:00	0:00
H452	H452	0:00	0	0:00	0:00
H453	H453	0:00	0	0:00	0:00
H454	H454	0:00	0	0:00	0:00
H455	H455	0:00	0	0:00	0:00
H456	H456	0:00	0	0:00	0:00
H457	H457	0:00	0	0:00	0:00
H458	H458	0:00	0	0:00	0:00
H459	H459	0:00	0	0:00	0:00
H460	H460	0:00	0	0:00	0:00
H461	H461	0:00	0	0:00	0:00
H462	H462	0:00	0	0:00	0:00
H463	H463	0:00	0	0:00	0:00
H464	H464	0:00	0	0:00	0:00
H465	H465	0:00	0	0:00	0:00
H466	H466	0:00	0	0:00	0:00
H467	H467	0:00	0	0:00	0:00
H468	H468	0:00	0	0:00	0:00
H469	H469	0:00	0	0:00	0:00
H470	H470	0:00	0	0:00	0:00
H471	H471	0:00	0	0:00	0:00
H472	H472	0:00	0	0:00	0:00
H473	H473	0:00	0	0:00	0:00
H474	H474	0:00	0	0:00	0:00
H475	H475	0:00	0	0:00	0:00
H476	H476	0:00	0	0:00	0:00
H477	H477	0:00	0	0:00	0:00
H478	H478	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H479	H479	0:00	0	0:00	0:00
H480	H480	0:00	0	0:00	0:00
H481	H481	0:00	0	0:00	0:00
H482	H482	0:00	0	0:00	0:00
H483	H483	0:00	0	0:00	0:00
H484	H484	0:00	0	0:00	0:00
H485	H485	0:00	0	0:00	0:00
H486	H486	0:00	0	0:00	0:00
H487	H487	0:00	0	0:00	0:00
H488	H488	0:00	0	0:00	0:00
H489	H489	0:00	0	0:00	0:00
H490	H490	0:00	0	0:00	0:00
H491	H491	0:00	0	0:00	0:00
H492	H492	0:00	0	0:00	0:00
H493	H493	0:00	0	0:00	0:00
H494	H494	0:00	0	0:00	0:00
H495	H495	0:00	0	0:00	0:00
H496	H496	0:00	0	0:00	0:00
H497	H497	0:00	0	0:00	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	Primary	14:02	5:16
2	Primary	28:14	10:49
3	Primary	35:29	10:59
4	Primary	33:07	11:03
5	Primary	31:51	13:06
6	Primary	9:01	2:57
7	Primary	67:32	23:29
8	Primary	33:19	12:04
9	Primary	93:49	35:20
10	Primary	95:33	38:14
11	Primary	21:58	7:46
12	Primary	51:38	18:23
13	Primary	5:18	2:00
14	Primary	56:07	20:25
15	Primary	65:56	25:00
16	Primary	4:51	1:43
17	Primary	0:24	0:08
18	Primary	12:58	3:57
19	Primary	32:31	12:23
20	Primary	32:58	10:44
21	Primary	0:00	0:00
22	Primary	49:21	18:25
23	Primary	6:05	2:16
24	Primary	0:00	0:00
25	Primary	9:39	3:23
26	Primary	85:35	28:14
27	Primary	29:44	11:49
28	Primary	32:04	12:07
29	Primary	24:49	7:07
30	Primary	35:49	13:26
31	Primary	29:59	11:53
32	Primary	11:32	3:47
33	Primary	26:49	9:52
34	Primary	46:55	17:53

To be continued on next page...

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Main Result

Calculation: V117-3.3 80m HH v24

...continued from previous page

No.	Name	Worst case [h/year]	Expected [h/year]
35	Primary	31:33	12:12
36	Primary	8:53	3:09
37	Primary	5:58	2:01
38	Primary	51:54	19:49
39	Primary	26:08	8:58
40	Primary	39:15	15:22
41	Primary	22:24	7:41
42	Primary	11:20	4:17
43	Primary	28:58	8:18
44	Primary	18:22	6:25
45	Primary	62:27	23:40
46	Primary	23:55	9:47
47	Primary	25:34	11:03
48	Primary	1:22	0:21
49	Primary	54:50	18:57
50	Primary	63:46	21:52
51	Primary	72:46	25:44
52	Primary	46:25	17:28
53	Primary	29:37	9:36
54	Primary	55:14	16:35
55	Primary	55:11	20:46
56	Primary	3:52	1:08
57	Primary	55:52	20:24
58	Primary	65:20	26:13
59	Primary	18:06	6:45
60	Primary	3:23	1:15

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H048 - H048

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:24	20:57	21:13	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H049 - H049

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
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	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H050 - H050

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H051 - H051

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H052 - H052

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:45
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:58	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:29	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:06	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H053 - H053

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:50	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:12	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:00	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:36	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:24	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:35	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:05	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
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	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
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	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:43	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H080 - H080

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:50	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H081 - H081

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:50	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:00	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:36	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:47	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:35	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:02	06:37	07:13	07:50	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H082 - H082

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
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	17:01	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
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	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
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	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
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	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H083 - H083

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:45
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:58	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:06	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H084 - H084

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H085 - H085

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H086 - H086

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H087 - H087

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H088 - H088

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:40	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H090 - H090

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:40	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H091 - H091

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:22	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H092 - H092

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
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	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
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	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:57
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20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:14	20:55	20:10	19:13	18:20	16:48	16:53	16:53
30	07:46	07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01	16:53
	17:31	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54	16:54
31	07:45	07:09	07:19	06:19	05:45	06:10	06:46	07:22	07:59	07:39	08:01	16:54
	17:32	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:16	16:48	16:54	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H093 - H093

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H094 - H094

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:47	07:13	07:20	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30	18:12	19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:18	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:14	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:09	07:16	06:17	05:45	05:43	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:16	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H095 - H095

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H096 - H096

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
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	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H097 - H097

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:12	16:47
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:16	07:52
	17:08	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:47
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:36	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:22	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H112 - H112

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H113 - H113

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:47
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
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	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
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	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H114 - H114

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:34	07:04 18:11	07:32 (57) 18:11	07:08 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15
2	08:01 16:57	07:43 17:35	07:02 18:12	07:34 (57) 18:12	07:06 19:52	06:15 20:28	05:44 21:02	05:45 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14
3	08:01 16:58	07:42 17:36	07:00 18:14	07:37 (57) 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:14 20:50	06:49 20:01	07:24 19:05	07:04 17:13
4	08:01 16:59	07:41 17:38	06:58 18:15	07:45 (57) 18:15	07:02 19:54	06:13 20:31	05:43 21:04	05:46 21:13	06:15 20:48	06:50 19:59	07:26 19:03	07:06 17:11
5	08:01 17:00	07:40 17:39	06:57 18:16		07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:16 20:47	06:52 19:57	07:27 19:02	07:07 17:10
6	08:01 17:01	07:38 17:41	06:55 18:18		06:58 19:57	06:10 20:33	05:42 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:09
7	08:01 17:02	07:37 17:42	06:53 18:19		06:57 19:58	06:08 20:34	05:42 21:06	05:48 21:12	06:18 20:44	06:54 19:54	07:29 18:56	07:10 17:07
8	08:01 17:03	07:36 17:43	07:51 18:20		06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:43	06:55 19:52	07:31 18:54	07:11 17:06
9	08:01 17:04	07:34 17:45	07:50 19:21		06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:53	07:12 17:05
10	08:00 17:05	07:33 17:46	07:48 19:23		06:51 20:01	06:05 20:38	05:41 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04
11	08:00 17:06	07:32 17:48	07:46 19:24		06:50 20:03	06:03 20:39	05:40 21:08	05:51 21:10	06:23 20:39	06:59 19:46	07:34 18:49	07:15 17:03
12	08:00 17:07	07:30 17:49	07:44 19:25		06:48 20:04	06:02 20:40	05:40 21:09	05:52 21:10	06:24 20:37	07:00 19:44	07:35 18:47	07:16 17:02
13	07:59 17:09	07:29 17:50	07:42 19:27		06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:09	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01
14	07:59 17:10	07:27 17:52	07:41 19:28		06:44 20:06	06:00 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	07:19 17:00
15	07:58 17:11	07:26 17:53	07:39 19:29		06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:59
16	07:58 17:12	07:25 17:55	07:37 19:30	07:46 (57)	06:41 20:09	05:58 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:41 18:40	07:22 16:58
17	07:57 17:13	07:23 17:56	07:35 19:32	07:44 (57)	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:07	06:30 20:30	07:06 19:35	07:42 18:39	07:23 16:57
18	07:57 17:15	07:22 17:57	07:33 19:33	07:42 (57)	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:24 16:56
19	07:56 17:16	07:20 17:59	07:31 19:34	07:41 (57)	06:36 20:13	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:27	07:08 19:31	07:44 18:35	07:26 16:55
20	07:55 17:17	07:18 18:00	07:30 19:35	07:39 (57)	06:34 20:14	05:53 20:49	05:40 21:12	05:59 21:04	06:33 20:25	07:09 19:29	07:46 18:34	07:27 16:54
21	07:55 17:19	07:17 18:00	07:28 19:37	07:38 (57)	06:32 20:15	05:52 20:50	05:41 21:13	06:00 21:03	06:34 20:23	07:10 19:28	07:47 18:32	07:28 16:48
22	07:54 17:20	07:15 18:02	07:26 19:38	07:36 (57)	06:31 20:16	05:52 20:51	05:41 21:13	06:01 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:29 16:49
23	07:53 17:21	07:14 18:03	07:24 19:39	07:34 (57)	06:29 20:17	05:51 20:52	05:41 21:13	06:02 21:02	06:37 20:20	07:13 19:24	07:50 18:29	07:31 16:52
24	07:52 17:23	07:12 18:04	07:22 19:40	07:33 (57)	06:28 20:19	05:50 20:54	05:41 21:13	06:03 21:01	06:38 20:18	07:14 19:22	07:51 18:27	07:32 16:51
25	07:51 17:24	07:10 18:06	07:20 19:42	07:31 (57)	06:26 20:20	05:49 20:55	05:42 21:13	06:04 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:33 16:50
26	07:50 17:25	07:09 18:07	07:19 19:43	07:30 (57)	06:24 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:51
27	07:49 17:27	07:07 18:08	07:17 19:44	07:31 (57)	06:23 20:22	05:47 20:56	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49
28	07:48 17:28	07:05 18:10	07:15 19:45	07:31 (57)	06:21 20:24	05:47 20:57	05:43 21:14	06:07 20:57	06:42 20:12	07:18 19:15	07:56 18:21	07:37 16:49
29	07:47 17:29		07:13 19:47		06:20 20:25	05:46 20:58	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	07:57 18:20	07:38 16:48
30	07:46 17:31		07:11 19:48		06:18 20:26	05:45 20:59	05:44 21:14	06:09 20:54	06:45 20:08	07:21 19:11	07:59 18:18	08:01 16:48
31	07:45 17:32		07:09 19:49		06:17 21:00	05:45 20:53	05:44 20:53	06:10 20:06	06:46 20:06	08:00 18:17		08:01 16:55
Potential sun hours	288	292	369		403	458	464	470	435	377	341	289
Total, worst case		215	40								256	276
Sun reduction		0.59	0.59								0.63	
Oper. time red.		0.98	0.98								0.98	
Wind dir. red.		0.63	0.63								0.63	
Total reduction		0.36	0.36								0.39	
Total, real		78	15								100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H115 - H115

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30	18:11	19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:12	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:09	07:19	06:17	05:45	05:40	06:10	06:46	07:22	08:00	07:40	08:01
	17:32	18:13	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H116 - H116

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	07:44	08:12 (57)	07:04	07:07	06:17
	16:56	17:34	37 08:49 (57)	18:11	19:50	20:27
2	08:01	07:43	08:13 (57)	07:02	07:06	06:15
	16:57	17:35	36 08:49 (57)	18:12	19:52	20:28
3	08:01	07:42	08:13 (57)	07:00	07:04	06:14
	16:58	17:36	36 08:49 (57)	18:14	19:53	20:30
4	08:01	07:41	08:13 (57)	06:58	07:02	06:13
	16:59	17:38	35 08:48 (57)	18:15	19:54	20:31
5	08:01	07:40	08:14 (57)	06:57	07:00	06:11
	17:00	17:39	34 08:48 (57)	18:16	19:55	20:32
6	08:01	07:38	08:15 (57)	06:55	06:58	06:10
	17:01	17:41	33 08:48 (57)	18:18	19:57	20:33
7	08:01	07:37	08:16 (57)	06:53	06:57	06:08
	17:02	17:42	31 08:47 (57)	18:19	19:58	20:34
8	08:01	07:36	08:17 (57)	07:51	06:55	06:07
	17:03	17:43	29 08:46 (57)	18:20	19:59	20:36
9	08:01	08:24 (57)	07:34	08:18 (57)	07:50	06:53
	17:04	1 08:25 (57)	17:45	27 08:45 (57)	19:21	20:00
10	08:00	08:24 (57)	07:33	08:19 (57)	07:48	06:51
	17:05	5 08:29 (57)	17:46	24 08:43 (57)	19:23	20:01
11	08:00	08:24 (57)	07:32	08:21 (57)	07:46	06:49
	17:06	8 08:32 (57)	17:48	21 08:42 (57)	19:24	20:03
12	08:00	08:23 (57)	07:30	08:24 (57)	07:44	06:48
	17:07	10 08:33 (57)	17:49	16 08:40 (57)	19:25	20:04
13	07:59	08:23 (57)	07:29	08:28 (57)	07:42	06:46
	17:08	13 08:36 (57)	17:50	7 08:35 (57)	19:27	20:05
14	07:59	08:22 (57)	07:27	07:41	06:44	06:00
	17:10	15 08:37 (57)	17:52	19:28	20:06	20:43
15	07:58	08:21 (57)	07:26	07:39	06:43	05:59
	17:11	17 08:38 (57)	17:53	19:29	20:08	20:44
16	07:58	08:21 (57)	07:25	07:37	07:57 (58)	06:41
	17:12	18 08:39 (57)	17:55	19:30	3 08:00 (58)	20:09
17	07:57	08:20 (57)	07:23	07:35	07:55 (58)	06:39
	17:13	20 08:40 (57)	17:56	19:32	6 08:01 (58)	20:10
18	07:57	08:19 (57)	07:21	07:33	07:53 (58)	06:37
	17:15	22 08:41 (57)	17:57	19:33	9 08:02 (58)	20:11
19	07:56	08:19 (57)	07:20	07:31	07:52 (58)	06:36
	17:16	24 08:43 (57)	17:59	19:34	12 08:04 (58)	20:13
20	07:55	08:18 (57)	07:18	07:30	07:50 (58)	06:34
	17:17	25 08:43 (57)	18:00	19:35	14 08:04 (58)	20:14
21	07:55	08:17 (57)	07:17	07:28	07:48 (58)	06:32
	17:19	27 08:44 (57)	18:00	19:37	16 08:04 (58)	20:15
22	07:54	08:16 (57)	07:15	07:26	07:46 (58)	06:31
	17:20	29 08:45 (57)	18:02	19:38	17 08:03 (58)	20:16
23	07:53	08:15 (57)	07:14	07:24	07:44 (58)	06:29
	17:21	30 08:45 (57)	18:03	19:39	19 08:03 (58)	20:17
24	07:52	08:15 (57)	07:12	07:22	07:42 (58)	06:28
	17:23	32 08:47 (57)	18:04	19:40	20 08:02 (58)	20:19
25	07:51	08:14 (57)	07:10	07:20	07:40 (58)	06:26
	17:24	33 08:47 (57)	18:06	19:42	21 08:01 (58)	20:20
26	07:50	08:13 (57)	07:09	07:19	07:41 (58)	06:24
	17:25	35 08:48 (57)	18:07	19:43	20 08:01 (58)	20:21
27	07:49	08:12 (57)	07:07	07:17	07:42 (58)	06:23
	17:27	36 08:48 (57)	18:08	19:44	17 07:59 (58)	20:22
28	07:48	08:12 (57)	07:05	07:15	07:43 (58)	06:21
	17:28	37 08:49 (57)	18:10	19:45	14 07:57 (58)	20:24
29	07:47	08:11 (57)		07:13	07:45 (58)	06:20
	17:29	37 08:48 (57)		19:47	9 07:54 (58)	20:25
30	07:46	08:11 (57)		07:11	06:18	05:45
	17:31	37 08:48 (57)		19:48	20:26	20:59
31	07:45	08:12 (57)		07:09		05:45
	17:32	37 08:49 (57)		19:49		21:00
Potential sun hours	288	292	369	403	458	464
Total, worst case	548	366	197			
Sun reduction	0.57	0.59	0.59			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.69	0.69	0.60			
Total reduction	0.38	0.40	0.35			
Total, real	211	146	69			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H116 - H116

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:01	07:48 (57) 07:40
	21:13	20:52	20:04	19:09	17:15	25 08:13 (57) 16:47
2	05:45	06:12	06:48	07:23	07:03	07:48 (57) 07:41
	21:13	20:51	20:03	19:07	17:14	27 08:15 (57) 16:47
3	05:45	06:13	06:49	07:24	07:04	07:46 (57) 07:43
	21:13	20:50	20:01	19:05	17:13	30 08:16 (57) 16:47
4	05:46	06:15	06:50	07:26	07:05	07:45 (57) 07:44
	21:13	20:48	19:59	19:03	17:11	31 08:16 (57) 16:46
5	05:46	06:16	06:52	07:27	07:07	07:45 (57) 07:45
	21:13	20:47	19:57	19:02	17:10	33 08:18 (57) 16:46
6	05:47	06:17	06:53	07:28	07:08	07:44 (57) 07:46
	21:12	20:46	19:55	19:00	17:09	34 08:18 (57) 16:46
7	05:48	06:18	06:54	07:29	07:10	07:44 (57) 07:47
	21:12	20:44	19:54	18:56	17:07	35 08:19 (57) 16:46
8	05:49	06:19	06:55	07:31	07:11	07:43 (57) 07:48
	21:12	20:43	19:52	18:54	17:06	36 08:19 (57) 16:46
9	05:49	06:20	06:56	07:32	07:12	07:44 (57) 07:49
	21:11	20:42	19:50	18:53	17:05	36 08:20 (57) 16:46
10	05:50	06:21	06:57	07:33	07:14	07:43 (57) 07:50
	21:11	20:40	19:48	18:51	17:04	37 08:20 (57) 16:46
11	05:51	06:23	06:59	07:34	07:15	07:44 (57) 07:51
	21:10	20:39	19:46	18:49	17:03	37 08:21 (57) 16:46
12	05:52	06:24	07:00	07:35	07:16	07:43 (57) 07:51
	21:10	20:37	19:44	18:47	17:02	37 08:20 (57) 16:46
13	05:52	06:25	07:01	07:37	07:18	07:43 (57) 07:52
	21:09	20:36	19:43	18:46	17:01	37 08:20 (57) 16:46
14	05:53	06:26	07:02	7 07:36 (58) 07:38	07:19	07:44 (57) 07:53
	21:09	20:34	19:41	7 07:43 (58) 18:44	17:00	37 08:21 (57) 16:46
15	05:54	06:27	07:03	13 07:33 (58) 07:39	07:20	07:44 (57) 07:54
	21:08	20:33	19:39	13 07:46 (58) 18:42	16:58	36 08:20 (57) 16:46
16	05:55	06:28	07:04	17 07:30 (58) 07:41	07:22	07:46 (57) 07:55
	21:07	20:31	19:37	17 07:47 (58) 18:40	16:58	35 08:21 (57) 16:46
17	05:56	06:30	07:06	19 07:30 (58) 07:42	07:23	07:47 (57) 07:55
	21:07	20:30	19:35	19 07:49 (58) 18:39	16:57	33 08:20 (57) 16:47
18	05:57	06:31	07:07	21 07:28 (58) 07:43	07:24	07:49 (57) 07:56
	21:06	20:28	19:33	21 07:49 (58) 18:37	16:56	32 08:21 (57) 16:47
19	05:58	06:32	07:08	25 07:29 (58) 07:44	07:26	07:50 (57) 07:57
	21:05	20:27	19:31	20 07:49 (58) 18:35	16:55	30 08:20 (57) 16:47
20	05:59	06:33	07:09	29 07:30 (58) 07:46	07:27	07:51 (57) 07:57
	21:04	20:25	19:29	19 07:49 (58) 18:34	16:54	29 08:20 (57) 16:48
21	06:00	06:34	07:10	33 07:31 (58) 07:47	07:28	07:53 (57) 07:58
	21:03	20:23	19:28	18 07:49 (58) 18:32	16:53	27 08:20 (57) 16:48
22	06:01	06:35	07:11	37 07:32 (58) 07:48	07:29	07:54 (57) 07:58
	21:03	20:22	19:26	16 07:48 (58) 18:30	16:52	25 08:19 (57) 16:49
23	06:02	06:36	07:13	41 07:34 (58) 07:50	07:31	07:55 (57) 07:59
	21:02	20:20	19:24	14 07:48 (58) 18:29	16:52	24 08:19 (57) 16:49
24	06:03	06:38	07:14	45 07:35 (58) 07:51	07:32	07:57 (57) 07:59
	21:01	20:18	19:22	12 07:47 (58) 18:27	16:51	22 08:19 (57) 16:50
25	06:04	06:39	07:15	49 07:36 (58) 07:52	07:33	07:58 (57) 08:00
	21:00	20:17	19:20	10 07:46 (58) 18:26	16:50	20 08:18 (57) 16:50
26	06:05	06:40	07:16	53 07:37 (58) 07:53	07:34	07:59 (57) 08:00
	20:59	20:15	19:18	7 07:44 (58) 18:24	16:50	18 08:17 (57) 16:51
27	06:06	06:41	07:17	57 07:38 (58) 07:55	07:36	08:01 (57) 08:00
	20:58	20:13	19:16	4 07:42 (58) 18:23	16:49	17 08:18 (57) 16:52
28	06:07	06:42	07:18	61 07:39 (58) 07:56	07:37	08:02 (57) 08:01
	20:57	20:11	19:14	18:21	16:49	15 08:17 (57) 16:52
29	06:08	06:43	07:20	65 07:57	08:56 (57) 07:38	08:03 (57) 08:01
	20:56	20:10	19:13	18:20	10 09:06 (57) 16:48	13 08:16 (57) 16:53
30	06:09	06:45	07:21	69 07:59	08:52 (57) 07:39	08:04 (57) 08:01
	20:54	20:08	19:11	18:18	17 09:09 (57) 16:48	11 08:15 (57) 16:54
31	06:10	06:46		73 08:00	08:51 (57)	08:01
	20:53	20:06		18:17	21 09:12 (57)	16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case			197	48	859	16
Sun reduction			0.69	0.63	0.50	0.49
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.60	0.69	0.69	0.69
Total reduction			0.41	0.43	0.34	0.33
Total, real			80	20	290	5

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H117 - H117

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:24	20:57	21:13	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53	16:53
30	07:46	07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01	08:01
	17:31	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54	16:54
31	07:45	07:09	07:19	06:19	05:45	06:10	06:46	07:22	08:00	08:00	08:01	08:01
	17:32	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H118 - H118

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:01	07:44	07:03	07:24 (59)	07:07	19:27 (57)	06:17	05:44	20:20 (58)	
	16:56	17:34	18:11	28 07:52 (59)	19:50	1 19:28 (57)	20:27	21:01	15 20:35 (58)	
2	08:01	07:43	07:02	07:22 (59)	07:06	19:26 (57)	06:15	05:44	20:21 (58)	
	16:57	17:35	18:12	30 07:52 (59)	19:52	4 19:30 (57)	20:28	21:02	15 20:36 (58)	
3	08:01	07:42	07:00	07:21 (59)	07:04	19:25 (57)	06:14	05:43	20:20 (58)	
	16:58	17:36	18:13	31 07:52 (59)	19:53	6 19:31 (57)	20:30	21:03	16 20:36 (58)	
4	08:01	07:41	06:58	07:19 (59)	07:02	19:24 (57)	06:12	05:43	20:21 (58)	
	16:59	17:38	18:15	33 07:52 (59)	19:54	8 19:32 (57)	20:31	21:03	16 20:37 (58)	
5	08:01	07:39	06:57	07:17 (59)	07:00	19:24 (57)	06:11	05:42	20:21 (58)	
	17:00	17:39	18:16	35 07:52 (59)	19:55	9 19:33 (57)	20:32	21:04	17 20:38 (58)	
6	08:01	07:38	06:55	07:15 (60)	06:58	19:23 (57)	06:10	05:42	20:20 (58)	
	17:01	17:41	18:17	36 07:51 (59)	19:56	11 19:34 (57)	20:33	21:05	18 20:38 (58)	
7	08:01	07:37	06:53	07:13 (60)	06:57	19:24 (57)	06:08	05:41	20:21 (58)	
	17:02	17:42	18:19	37 07:50 (59)	19:58	12 19:36 (57)	20:34	21:06	18 20:39 (58)	
8	08:01	07:36	07:51	08:12 (60)	06:55	19:24 (57)	06:07	05:41	20:21 (58)	
	17:03	17:43	18:20	38 08:50 (59)	19:59	13 19:37 (57)	20:36	21:06	19 20:40 (58)	
9	08:00	07:34	07:50	08:10 (60)	06:53	19:25 (57)	06:06	05:41	20:21 (58)	
	17:04	17:45	19:21	39 08:49 (59)	20:00	13 19:38 (57)	20:37	21:07	20 20:41 (58)	
10	08:00	07:33	07:48	08:08 (60)	06:51	19:25 (57)	06:04	05:41	20:21 (58)	
	17:05	17:46	19:23	40 08:48 (59)	20:01	13 19:38 (57)	20:38	21:08	20 20:41 (58)	
11	08:00	07:32	07:46	08:07 (60)	06:49	19:28 (57)	06:03	05:40	20:21 (58)	
	17:06	17:48	19:24	39 08:46 (59)	20:03	9 19:37 (57)	20:39	21:08	20 20:41 (58)	
12	08:00	07:30	07:44	08:09 (60)	06:48		06:02	05:40	20:21 (58)	
	17:07	17:49	19:25	32 08:44 (59)	20:04		20:40	21:09	21 20:42 (58)	
13	07:59	07:29	07:42	08:22 (59)	06:46		06:01	05:40	20:22 (58)	
	17:08	17:50	19:27	21 08:43 (59)	20:05		20:41	21:09	21 20:43 (58)	
14	07:59	07:27	07:40	08:25 (59)	06:44		06:00	05:40	20:22 (58)	
	17:10	17:52	19:28	15 08:40 (59)	20:06		20:43	21:10	21 20:43 (58)	
15	07:58	07:26	07:39	08:29 (59)	06:42		05:59	05:40	20:22 (58)	
	17:11	17:53	19:29	5 08:34 (59)	20:08		20:44	21:10	22 20:44 (58)	
16	07:58	07:24	07:37		06:41		05:57	05:40	20:22 (58)	
	17:12	17:55	19:30		20:09		20:45	21:11	22 20:44 (58)	
17	07:57	07:23	07:35		06:39		05:56	05:40	20:22 (58)	
	17:13	17:56	19:32		20:10		20:46	21:11	22 20:44 (58)	
18	07:56	07:21	07:33		06:37		05:55	05:40	20:22 (58)	
	17:15	17:57	19:33		20:11		20:47	21:12	22 20:44 (58)	
19	07:56	07:20	07:31		06:36		05:54	05:40	20:23 (58)	
	17:16	17:59	19:34		20:12		20:48	21:12	22 20:45 (58)	
20	07:55	07:18	07:29		06:34		05:53	05:40	20:23 (58)	
	17:17	18:00	19:35		20:14		20:49	21:12	22 20:45 (58)	
21	07:54	07:17	07:38 (59)	07:28	06:32		05:52	05:40	20:24 (58)	
	17:18	18:00	4 07:42 (59)	19:37	20:15		20:50	21:13	22 20:46 (58)	
22	07:54	07:15	07:36 (59)	07:26	06:31		05:51	05:41	20:24 (58)	
	17:20	18:01	9 07:45 (59)	19:38	20:16		20:51	21:13	22 20:46 (58)	
23	07:53	07:13	07:34 (59)	07:24	06:29		05:51	05:41	20:24 (58)	
	17:21	18:03	12 07:46 (59)	19:39	20:17		20:52	2 20:27 (58)	21:13	22 20:46 (58)
24	07:52	07:12	07:33 (59)	07:22	06:27		05:50	20:24 (58)	05:41	20:23 (58)
	17:23	18:04	16 07:49 (59)	19:40	20:19		20:53	4 20:28 (58)	21:13	23 20:46 (58)
25	07:51	07:10	07:31 (59)	07:20	06:26		05:49	20:24 (58)	05:41	20:24 (58)
	17:24	18:05	19 07:50 (59)	19:42	20:20		20:54	5 20:29 (58)	21:13	22 20:46 (58)
26	07:50	07:09	07:29 (59)	07:18	06:24		05:48	20:23 (58)	05:42	20:24 (58)
	17:25	18:07	21 07:50 (59)	19:43	20:21		20:55	7 20:30 (58)	21:13	22 20:46 (58)
27	07:49	07:07	07:28 (59)	07:17	06:23		05:47	20:22 (58)	05:42	20:24 (58)
	17:27	18:08	24 07:52 (59)	19:44	20:22		20:56	9 20:31 (58)	21:13	22 20:46 (58)
28	07:48	07:05	07:26 (59)	07:15	06:21		05:47	20:22 (58)	05:43	20:25 (58)
	17:28	18:10	26 07:52 (59)	19:45	20:23		20:57	10 20:32 (58)	21:13	21 20:46 (58)
29	07:47		07:13		06:20		05:46	20:21 (58)	05:43	20:25 (58)
	17:29		19:47		20:25		20:58	12 20:33 (58)	21:13	21 20:46 (58)
30	07:46		07:11		06:18		05:45	20:21 (58)	05:44	20:25 (58)
	17:31		19:48		20:26		20:59	12 20:33 (58)	21:13	21 20:46 (58)
31	07:45		07:09		06:17		05:45	20:21 (58)		
	17:32		19:49		21:00	13	20:34 (58)			
Potential sun hours	288	292	369	403	458	464				
Total, worst case		131	459	99	74	607				
Sun reduction		0.59	0.59	0.61	0.65	0.70				
Oper. time red.		0.98	0.98	0.98	0.98	0.98				
Wind dir. red.		0.62	0.62	0.61	0.68	0.68				
Total reduction		0.36	0.36	0.36	0.43	0.46				
Total, real		47	165	36	32	281				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H118 - H118

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December					
1	05:44	20:25 (58)	06:11	06:47	19:27 (57)	07:22	07:51 (60)	07:01	07:40		
	21	20:46 (58)	20:52	20:04	9	19:36 (57)	19:09	27	08:23 (59)	17:15	16:47
2	05:45	20:26 (58)	06:12	06:48	19:24 (57)	07:23	07:47 (60)	07:03	07:41		
	20	20:46 (58)	20:51	20:03	13	19:37 (57)	19:07	37	08:24 (59)	17:14	16:47
3	05:45	20:25 (58)	06:13	06:49	19:23 (57)	07:24	07:45 (60)	07:04	07:42		
	20	20:45 (58)	20:49	20:01	13	19:36 (57)	19:05	40	08:25 (59)	17:13	16:47
4	05:46	20:26 (58)	06:15	06:50	19:21 (57)	07:26	07:47 (60)	07:05	07:44		
	19	20:45 (58)	20:48	19:59	13	19:34 (57)	19:03	39	08:26 (59)	17:11	16:46
5	05:46	20:27 (58)	06:16	06:52	19:20 (57)	07:27	07:48 (60)	07:07	07:45		
	19	20:46 (58)	20:47	19:57	12	19:32 (57)	19:01	38	08:26 (59)	17:10	16:46
6	05:47	20:26 (58)	06:17	06:53	19:19 (57)	07:28	07:49 (60)	07:08	07:46		
	19	20:45 (58)	20:46	19:55	12	19:31 (57)	19:00	38	08:27 (59)	17:09	16:46
7	05:48	20:27 (58)	06:18	06:54	19:19 (57)	07:29	07:50 (60)	07:09	07:47		
	18	20:45 (58)	20:44	19:54	10	19:29 (57)	18:56	36	08:26 (59)	17:07	16:46
8	05:48	20:28 (58)	06:19	06:55	19:18 (57)	07:30	07:52 (60)	07:11	07:48		
	17	20:45 (58)	20:43	19:52	9	19:27 (57)	18:54	35	08:27 (59)	17:06	16:46
9	05:49	20:27 (58)	06:20	06:56	19:19 (57)	07:32	07:53 (59)	07:12	07:49		
	17	20:44 (58)	20:42	19:50	7	19:26 (57)	18:52	34	08:27 (59)	17:05	16:45
10	05:50	20:28 (58)	06:21	06:57	19:19 (57)	07:33	07:54 (59)	07:13	07:50		
	15	20:43 (58)	20:40	19:48	5	19:24 (57)	18:51	32	08:26 (59)	17:04	16:45
11	05:51	20:29 (58)	06:23	06:58	19:20 (57)	07:34	07:55 (59)	07:15	07:50		
	14	20:43 (58)	20:39	19:46	2	19:22 (57)	18:49	31	08:26 (59)	17:03	16:45
12	05:52	20:29 (58)	06:24	07:00	07:35	07:57 (59)	07:16	07:51			
	14	20:43 (58)	20:37	19:44	18:47	29	08:26 (59)	17:02	16:46		
13	05:52	20:29 (58)	06:25	07:01	07:37	07:58 (59)	07:17	07:52			
	13	20:42 (58)	20:36	19:42	18:45	27	08:25 (59)	17:00	16:46		
14	05:53	20:30 (58)	06:26	07:02	07:38	07:59 (59)	07:19	07:53			
	11	20:41 (58)	20:34	19:41	18:44	25	08:24 (59)	16:59	16:46		
15	05:54	20:30 (58)	06:27	07:03	07:39	08:01 (59)	07:20	07:54			
	11	20:41 (58)	20:33	19:39	18:42	23	08:24 (59)	16:58	16:46		
16	05:55	20:31 (58)	06:28	07:04	07:40	08:02 (59)	07:21	07:54			
	9	20:40 (58)	20:31	19:37	18:40	20	08:22 (59)	16:57	16:46		
17	05:56	20:32 (58)	06:29	07:05	07:42	08:03 (59)	07:23	07:55			
	8	20:40 (58)	20:30	19:35	18:39	18	08:21 (59)	16:56	16:46		
18	05:57	20:33 (58)	06:31	07:07	07:43	08:05 (59)	07:24	07:56			
	6	20:39 (58)	20:28	19:33	18:37	15	08:20 (59)	16:56	16:47		
19	05:58	20:34 (58)	06:32	07:08	07:44	08:06 (59)	07:25	07:56			
	5	20:39 (58)	20:26	19:31	18:35	11	08:17 (59)	16:55	16:47		
20	05:59	20:35 (58)	06:33	07:09	07:46	08:07 (59)	07:27	07:57			
	3	20:38 (58)	20:25	19:29	18:34	7	08:14 (59)	16:54	16:48		
21	06:00	20:35 (58)	06:34	07:10	07:47	08:09 (59)	07:28	07:58			
	1	20:36 (58)	20:23	19:27	18:32	2	08:11 (59)	16:53	16:48		
22	06:01	06:35	07:11	07:48	07:29	07:58					
	21:02	20:22	19:26	18:30	16:52	16:49					
23	06:02	06:36	07:12	07:49	07:31	07:59					
	21:02	20:20	19:24	18:29	16:52	16:49					
24	06:03	06:38	07:14	07:51	07:32	07:59					
	21:01	20:18	19:22	18:27	16:51	16:50					
25	06:04	06:39	07:15	07:52	07:33	07:59					
	21:00	20:17	19:20	18:26	16:50	16:50					
26	06:05	06:40	07:16	07:53	07:34	08:00					
	20:59	20:15	19:18	18:24	16:50	16:51					
27	06:06	06:41	07:17	07:55	07:36	08:00					
	20:58	20:13	19:16	18:23	16:49	16:52					
28	06:07	06:42	07:18	07:56	07:37	08:00					
	20:57	20:11	19:14	18:21	16:49	16:52					
29	06:08	06:43	07:20	08:06 (59)	07:57	07:38	08:01				
	20:55	20:10	19:13	12	08:18 (59)	18:20	16:48	16:53			
30	06:09	06:45	07:21	08:03 (59)	07:59	07:39	08:01				
	20:54	20:08	19:11	18	08:21 (59)	18:18	16:48	16:54			
31	06:10	06:46	07:22	08:00	08:00	08:01					
	20:53	20:06	19:10	18:17	16:55	16:55					
Potential sun hours	470	435	377	341	289	276					
Total, worst case	280		135	564							
Sun reduction	0.76		0.69	0.63							
Oper. time red.	0.98		0.98	0.98							
Wind dir. red.	0.68		0.61	0.62							
Total reduction	0.50		0.41	0.38							
Total, real	141		56	216							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H119 - H119

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
 3100 DeMers Avenue
 US-GRAND FORKS, ND 58201
 +1 701 775 3000
 Jay Haley / jhaley@eapc.net
 Calculated:
 6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H147 - H147

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:01	07:44	07:03	07:07	06:17	19:49 (55)	05:44	05:44	06:11	06:47	07:22	07:01			
	16:56	17:33	18:11	19:50	20:27	20:04 (55)	21:01	21:13	20:52	20:04	19:09	17:15			
2	08:01	07:43	07:02	07:05	06:15	19:49 (55)	05:43	05:44	06:12	06:48	07:23	07:03			
	16:56	17:35	18:12	19:51	20:28	20:05 (55)	21:02	21:13	20:51	20:02	19:07	17:14			
3	08:01	07:42	07:00	07:04	06:14	19:49 (55)	05:43	05:45	06:13	06:49	07:24	07:04			
	16:57	17:36	18:13	19:53	20:29	20:06 (55)	21:03	21:13	20:49	20:01	19:05	17:12			
4	08:01	07:41	06:58	07:02	06:12	19:49 (55)	05:42	05:46	06:14	7	20:06 (55)	06:50			
	16:58	17:38	18:15	19:54	20:31	20:07 (55)	21:03	21:13	20:48	19:59	19:03	17:11			
5	08:01	07:39	06:56	07:00	06:11	19:50 (55)	05:42	05:46	06:15	20:03 (55)	06:51	07:27			
	16:59	17:39	18:16	19:55	20:32	20:08 (55)	21:04	21:12	20:47	12	20:15 (55)	06:57			
6	08:01	07:38	06:55	06:58	06:10	19:51 (55)	05:42	05:47	06:17	20:02 (55)	06:53	07:28			
	17:00	17:40	18:17	19:56	20:33	20:07 (55)	21:05	21:12	20:46	14	20:16 (55)	19:55			
7	08:01	07:37	06:53	06:56	06:08	19:52 (55)	05:41	05:48	06:18	20:00 (55)	06:54	07:29			
	17:01	17:42	18:19	19:58	20:34	20:05 (55)	21:06	21:12	20:44	17	20:17 (55)	19:53			
8	08:01	07:36	07:51	06:55	06:07	19:53 (55)	05:41	05:48	06:19	19:59 (55)	06:55	07:30			
	17:02	17:43	18:20	19:59	20:35	20:04 (55)	21:06	21:11	20:43	18	20:17 (55)	19:52			
9	08:00	07:34	07:49	06:53	06:06	19:56 (55)	05:41	05:49	06:20	19:59 (55)	06:56	07:32			
	17:04	17:45	19:21	20:00	20:37	5	20:01 (55)	21:07	21:11	17	20:16 (55)	19:50			
10	08:00	07:33	07:48	06:51	06:04			05:40	05:50	06:21	19:58 (55)	06:57			
	17:05	17:46	19:23	20:01	20:38			21:08	21:11	20:40	16	20:14 (55)	19:48		
11	08:00	07:31	07:46	06:49	06:03			05:40	05:51	06:22	19:57 (55)	06:58			
	17:06	17:47	19:24	20:02	20:39			21:08	21:10	20:39	16	20:13 (55)	19:46		
12	07:59	07:30	07:44	06:47	06:02			05:40	05:51	06:23	19:57 (55)	06:59			
	17:07	17:49	19:25	20:04	20:40			21:09	21:10	20:37	14	20:11 (55)	19:44		
13	07:59	16:39 (56)	07:29	07:42	06:46			05:40	05:52	06:25	19:57 (55)	07:01			
	17:08	1	16:40 (56)	17:50	19:26	20:05		20:41	21:09	20:36	13	20:10 (55)	19:42		
14	07:59	16:39 (56)	07:27	07:40	06:44			05:59	05:53	06:26	19:57 (55)	07:02			
	17:09	3	16:42 (56)	17:52	19:28	20:06		20:42	21:10	21:08	20:34	11	20:08 (55)	19:40	
15	07:58	16:39 (56)	07:26	07:39	06:42			05:58	05:40	05:54	06:27	19:58 (55)	07:03		
	17:11	4	16:43 (56)	17:53	19:29	20:07		20:44	21:10	21:08	20:33	10	20:08 (55)	19:39	
16	07:58	16:40 (56)	07:24	07:37	06:41			05:57	05:40	05:55	06:28	19:58 (55)	07:04		
	17:12	5	16:45 (56)	17:54	19:30	20:09		20:45	21:11	21:07	20:31	8	20:06 (55)	19:37	
17	07:57	16:40 (56)	07:23	07:35	06:39			05:56	05:40	05:56	06:29	19:59 (55)	07:05		
	17:13	6	16:46 (56)	17:56	19:31	20:10		20:46	21:11	21:06	20:30	6	20:05 (55)	19:35	
18	07:56	16:40 (56)	07:21	07:33	06:37			05:55	05:40	05:57	06:30	6	19:59 (55)	07:06	
	17:14	7	16:47 (56)	17:57	19:33	20:11		20:47	21:12	21:06	20:28	4	20:03 (55)	19:33	
19	07:56	16:41 (56)	07:20	07:31	06:35			05:54	05:40	05:58	06:32		07:08	07:44	
	17:16	8	16:49 (56)	17:59	19:34	20:12		20:48	21:12	21:05	20:26		19:31	18:35	
20	07:55	16:41 (56)	07:18	07:29	06:34			05:53	05:40	05:58	06:33		07:09	07:45	
	17:17	9	16:50 (56)	18:00	19:35	20:14		20:49	21:12	21:04	20:25		19:29	18:33	
21	07:54	16:42 (56)	07:17	07:28	06:32			05:52	05:40	05:59	06:34		07:10	07:47	
	17:18	9	16:51 (56)	18:00	19:36	20:15		20:50	21:12	21:03	20:23		19:27	18:32	
22	07:54	16:42 (56)	07:15	07:26	06:31			05:51	05:40	06:00	06:35		07:11	07:48	
	17:20	11	16:53 (56)	18:01	19:38	20:16		20:51	21:13	21:02	20:21		19:25	18:30	
23	07:53	16:43 (56)	07:13	07:24	06:29			05:50	05:41	06:01	06:36		07:12	07:49	
	17:21	11	16:54 (56)	18:03	19:39	20:17		20:52	21:13	21:01	20:20		19:24	18:29	
24	07:52	16:44 (56)	07:12	07:22	06:27			19:55 (55)	05:41	06:02	06:37		07:13	07:51	
	17:22	11	16:55 (56)	18:04	19:40	20:18	1	19:56 (55)	20:53	21:13	21:01	20:18		19:22	18:27
25	07:51	16:45 (56)	07:10	07:20	06:26			19:52 (55)	05:41	06:03	06:39		07:15	07:52	
	17:24	12	16:57 (56)	18:05	19:41	20:20	4	19:56 (55)	20:54	21:13	21:00	20:16		19:20	18:25
26	07:50	16:46 (56)	07:08	07:18	06:24			19:52 (55)	05:42	06:05	06:40		07:16	07:53	
	17:25	11	16:57 (56)	18:07	19:43	20:21	6	19:58 (55)	20:55	21:13	20:59	20:15		19:18	18:24
27	07:49	16:48 (56)	07:07	07:16	06:23			19:50 (55)	05:47	05:42	06:06	06:41		07:17	07:55
	17:26	8	16:56 (56)	18:08	19:44	20:22	9	19:59 (55)	20:56	21:13	20:57	20:13		19:16	18:22
28	07:48	07:05	07:15	06:21				19:50 (55)	05:46	05:42	06:07	06:42		07:18	07:56
	17:28	18:09	19:45	20:23	10	20:00 (55)	20:57	21:13	20:56	20:11	20:11	20:11		19:14	18:21
29	07:47		07:13	06:20				19:49 (55)	05:46	05:43	06:08	06:43		07:19	07:57
	17:29		19:46	20:25	12	20:01 (55)	20:58	21:13	20:55	20:10	20:10	20:10		19:12	18:19
30	07:46		07:11	06:18				19:49 (55)	05:45	05:43	06:09	06:44		07:21	07:59
	17:31		19:48	20:26	14	20:03 (55)	20:59	21:13	20:54	20:08	20:08	20:08		19:11	18:18
31	07:45		07:09					05:44		06:10	06:46			08:00	
	17:32		19:49					21:00		20:53	20:06			18:17	
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276			
Total, worst case	116			56	129			183			116				
Sun reduction	0.57			0.61	0.65			0.74			0.50				
Oper. time red.	0.98			0.98	0.98			0.98			0.98				
Wind dir. red.	0.56			0.63	0.63			0.63			0.56				
Total reduction	0.31			0.37	0.40			0.45			0.27				
Total, real	36			21	51			82			32				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H148 - H148

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	18:45 (55) 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04		07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	18:45 (55) 20:28	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:02	18:56 (55) 19:06 (55)	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	18:47 (55) 20:29	05:43 21:03	05:45 21:13	06:13 20:49	06:49 20:01	18:52 (55) 19:10 (55)	07:24 19:05	07:04 17:12	07:42 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	18:47 (55) 20:31	06:12 21:03	05:46 21:13	06:14 20:48	06:50 19:59	18:49 (55) 19:12 (55)	07:25 19:03	07:05 17:11	07:43 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	18:48 (55) 20:32	06:11 21:04	05:42 21:12	06:15 20:47	06:51 19:57	18:46 (55) 19:13 (55)	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	18:48 (55) 20:33	06:10 21:05	05:47 21:12	06:17 20:46	06:53 19:55	18:44 (55) 19:14 (55)	07:28 19:00	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	18:49 (55) 20:34	06:08 21:06	05:48 21:12	06:18 20:44	06:54 19:53	18:43 (55) 19:15 (55)	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:03	07:36 17:43	07:51 18:20	06:55 19:59	18:52 (55) 20:35	06:07 21:06	05:48 21:11	06:19 20:43	06:55 19:52	18:41 (55) 19:15 (55)	07:30 18:54	07:11 17:06	07:48 16:45
9	08:00 17:04	07:34 17:45	07:49 19:21	06:53 20:00	18:54 (55) 20:37	06:06 21:07	05:49 21:11	06:20 20:41	06:56 19:50	18:40 (55) 19:16 (55)	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	18:57 (55) 20:38	06:04 21:08	05:50 21:11	06:21 20:40	06:57 19:48	18:40 (55) 19:17 (55)	07:33 18:51	07:13 17:04	07:49 16:45
11	08:00 17:06	07:32 17:47	07:46 19:24	06:49 20:03	19:07 (55) 20:39	20:38 21:08	05:51 21:10	06:22 20:39	06:58 19:46	18:39 (55) 19:17 (55)	07:34 18:49	07:15 17:02	07:50 16:45
12	07:59 17:07	07:30 17:49	07:44 19:25	06:48 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	18:38 (55) 19:17 (55)	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:01 20:41	05:40 21:09	05:52 21:09	06:25 20:36	07:01 19:42	18:37 (55) 19:17 (55)	07:37 18:45	07:17 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:42	05:40 21:10	05:53 21:08	06:26 20:34	07:02 19:40	18:36 (55) 19:16 (55)	07:38 18:44	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:07	05:58 20:44	05:40 21:10	05:54 21:08	06:27 20:33	07:03 19:39	18:36 (55) 19:14 (55)	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	19:04 (55) 19:09 (55)	05:40 20:45	05:55 21:11	06:28 20:31	07:04 19:37	18:35 (55) 19:12 (55)	07:40 18:40	07:21 16:57	07:54 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	19:00 (55) 19:10 (55)	05:40 20:46	05:56 21:11	06:29 21:06	07:05 19:35	18:35 (55) 19:10 (55)	07:42 18:38	07:23 16:56	07:55 16:46
18	07:56 17:14	07:21 17:57	07:33 19:33	06:37 20:11	18:57 (55) 19:11 (55)	05:40 20:47	05:57 21:12	06:30 21:06	07:06 19:33	18:36 (55) 19:09 (55)	07:43 18:37	07:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:35 20:12	18:55 (55) 19:12 (55)	05:40 20:48	05:58 21:12	06:32 21:05	07:08 19:31	18:35 (55) 19:07 (55)	07:44 18:35	07:25 16:55	07:56 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	18:54 (55) 19:15 (55)	05:40 20:49	05:58 21:12	06:33 21:04	07:09 19:29	18:35 (55) 19:05 (55)	07:45 18:33	07:27 16:54	07:57 16:47
21	07:54 17:18	07:17 18:00	07:28 19:37	06:32 20:15	18:52 (55) 19:16 (55)	05:40 20:50	05:59 21:13	06:34 20:23	07:10 19:27	18:36 (55) 19:03 (55)	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	18:51 (55) 19:17 (55)	05:40 20:51	06:00 21:13	06:35 20:21	07:11 19:25	18:36 (55) 19:01 (55)	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:03	07:24 19:39	06:29 20:17	18:49 (55) 19:18 (55)	05:40 20:52	06:01 21:13	06:36 21:01	07:12 20:20	18:37 (55) 19:02 (55)	07:49 18:29	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	18:48 (55) 19:19 (55)	05:41 20:53	06:02 21:13	06:37 21:01	07:13 19:22	18:38 (55) 18:56 (55)	07:51 18:27	07:32 16:51	07:59 16:49
25	07:51 17:24	07:10 18:05	07:20 19:41	06:26 20:20	18:47 (55) 19:20 (55)	05:41 20:54	06:04 21:13	06:39 21:00	07:15 19:20	18:40 (55) 18:55 (55)	07:52 18:25	07:33 16:50	07:59 16:50
26	07:50 17:25	07:08 18:07	07:18 19:43	06:24 20:21	18:46 (55) 19:21 (55)	05:48 20:55	05:42 21:13	06:40 20:59	07:16 19:18	18:42 (55) 18:53 (55)	07:53 18:24	07:34 16:49	08:00 16:51
27	07:49 17:26	07:07 18:08	07:16 19:44	06:23 20:22	18:47 (55) 19:23 (55)	05:42 20:56	06:06 21:13	06:41 20:58	07:17 19:16	18:44 (55) 18:51 (55)	07:55 18:22	07:35 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:23	18:46 (55) 19:24 (55)	05:46 20:57	06:07 21:13	06:42 20:56	07:18 19:14	18:45 (55) 19:11 (55)	07:56 18:21	07:37 16:48	08:00 16:52
29	07:47 17:29		07:13 19:46	06:20 20:25	18:46 (55) 19:25 (55)	05:46 20:58	06:08 21:13	06:43 20:55	07:19 19:12		07:57 18:19	07:38 16:48	08:01 16:53
30	07:46 17:31		07:11 19:48	06:18 20:26	18:46 (55) 19:25 (55)	05:45 20:59	06:09 21:13	06:44 20:54	07:21 19:11		07:59 18:18	07:39 16:47	08:01 16:54
31	07:45 17:32		07:09 19:49	06:17 20:27	18:45 (55) 19:25 (55)	05:44 21:00	06:10 20:53	06:46 20:06			08:00 18:17	08:01 16:54	
Potential sun hours	288	292	369	403	437	458	470	435	377	341	289	276	
Total, worst case					437	458	470	435	377	341	289	276	
Sun reduction					0.59				0.69				
Oper. time red.					0.98				0.98				
Wind dir. red.					0.59				0.59				
Total reduction					0.34				0.40				
Total, real					148				290				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H149 - H149

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January		February		March	April	May	June
1	08:01	14:48 (54)	07:44	07:03	07:07	06:17	19:46 (52)	05:44
	16:56	80 16:14 (53)	17:33	18:11	19:50	20:27	17 20:03 (52)	21:01
2	08:01	14:49 (54)	07:43	07:02	07:05	06:15	19:47 (52)	05:43
	16:57	79 16:14 (53)	17:35	18:12	19:51	20:28	15 20:02 (52)	21:02
3	08:01	14:50 (54)	07:42	07:00	07:04	06:14	19:48 (52)	05:43
	16:57	79 16:15 (53)	17:36	18:13	19:53	20:30	13 20:01 (52)	21:03
4	08:01	14:50 (54)	07:41	06:58	07:02	06:12	19:50 (52)	05:42
	16:58	77 16:14 (53)	17:38	18:15	19:54	20:31	8 19:58 (52)	21:03
5	08:01	14:51 (54)	07:39	06:57	07:00	06:11		05:42
	16:59	76 16:14 (53)	17:39	18:16	19:55	20:32		21:04
6	08:01	14:52 (54)	07:38	06:55	06:58	06:10		05:42
	17:00	74 16:14 (53)	17:40	18:17	19:56	20:33		21:05
7	08:01	14:53 (54)	07:37	06:53	06:56	06:08		05:41
	17:02	71 16:14 (53)	17:42	18:19	19:58	20:34		21:06
8	08:01	14:54 (54)	07:36	07:51	06:55	06:07		05:41
	17:03	70 16:14 (53)	17:43	18:20	19:59	20:36		21:06
9	08:00	14:54 (54)	07:34	07:49	06:53	06:06		05:41
	17:04	67 16:13 (53)	17:45	19:21	20:00	20:37		21:07
10	08:00	14:55 (54)	07:33	07:48	06:51	06:04		05:40
	17:05	65 16:13 (53)	17:46	19:23	20:01	20:38		21:08
11	08:00	14:56 (54)	07:32	07:46	06:49	06:03		05:40
	17:06	62 16:12 (53)	17:47	19:24	20:03	20:39		21:08
12	08:00	14:57 (54)	07:30	07:44	06:48	06:02		05:40
	17:07	57 16:11 (53)	17:49	19:25	20:04	20:40		21:09
13	07:59	14:58 (54)	07:29	07:42	06:46	06:01		05:40
	17:08	51 16:09 (53)	17:50	19:26	20:05	20:41		21:09
14	07:59	14:59 (54)	07:27	07:40	06:44	06:00		05:40
	17:09	43 15:42 (54)	17:52	19:28	20:06	20:43		21:10
15	07:58	15:00 (54)	07:26	07:39	06:42	05:58		05:40
	17:11	41 15:41 (54)	17:53	19:29	20:07	20:44		21:10
16	07:58	15:02 (54)	07:24	07:37	06:41	05:57		05:40
	17:12	40 15:42 (54)	17:54	19:30	20:09	20:45		21:11
17	07:57	15:03 (54)	07:23	07:35	06:39	05:56		05:40
	17:13	38 15:41 (54)	17:56	19:32	20:10	20:46		21:11
18	07:56	15:04 (54)	07:21	07:33	06:37	05:55		05:40
	17:14	36 15:40 (54)	17:57	19:33	20:11	20:47		21:12
19	07:56	15:07 (54)	07:20	07:31	06:36	05:54		05:40
	17:16	32 15:39 (54)	17:59	19:34	20:12	20:48		21:12
20	07:55	15:09 (54)	07:18	07:29	06:34	05:53		05:40
	17:17	29 15:38 (54)	18:00	19:35	20:14	20:49		21:12
21	07:54	15:11 (54)	07:17	07:28	06:32	19:50 (52)	05:52	05:40
	17:18	25 15:36 (54)	18:00	19:37	20:15	3 19:53 (52)	20:50	21:13
22	07:54	15:13 (54)	07:15	07:26	06:31	19:48 (52)	05:51	05:41
	17:20	21 15:34 (54)	18:01	19:38	20:16	5 19:53 (52)	20:51	21:13
23	07:53	15:16 (54)	07:13	07:24	06:29	19:46 (52)	05:50	05:41
	17:21	15 15:31 (54)	18:03	19:39	20:17	8 19:54 (52)	20:52	21:13
24	07:52		07:12	07:22	06:27	19:46 (52)	05:50	05:41
	17:22		18:04	19:40	20:19	10 19:56 (52)	20:53	21:13
25	07:51		07:10	07:20	06:26	19:45 (52)	05:49	05:41
	17:24		18:05	19:42	20:20	11 19:56 (52)	20:54	21:13
26	07:50		07:09	07:18	06:24	19:45 (52)	05:48	05:42
	17:25		18:07	19:43	20:21	13 19:58 (52)	20:55	21:13
27	07:49		07:07	07:17	06:23	19:44 (52)	05:47	05:42
	17:26		18:08	19:44	20:22	15 19:59 (52)	20:56	21:13
28	07:48		07:05	07:15	06:21	19:45 (52)	05:46	05:42
	17:28		18:09	19:45	20:23	15 20:00 (52)	20:57	21:13
29	07:47			07:13	06:20	19:45 (52)	05:46	05:43
	17:29			19:47	20:25	16 20:01 (52)	20:58	21:13
30	07:46			07:11	06:18	19:45 (52)	05:45	05:43
	17:31			19:48	20:26	18 20:03 (52)	20:59	21:13
31	07:45			07:09			05:45	
	17:32			19:49			21:00	
Potential sun hours	288		292	369	403		458	464
Total, worst case	1228				114		53	
Sun reduction	0.57				0.61		0.65	
Oper. time red.	0.98				0.98		0.98	
Wind dir. red.	0.58				0.63		0.63	
Total reduction	0.32				0.37		0.40	
Total, real	398				42		21	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H149 - H149

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:11	06:47	07:22	07:01	07:40	14:38 (54)		
	21:13	20:52	20:04	19:09	17:15	16:47	62 15:54 (53)		
2	05:44	06:12	06:48	07:23	07:03	07:41	14:38 (54)		
	21:13	20:51	20:03	19:07	17:14	16:47	65 15:56 (53)		
3	05:45	06:13	06:49	07:24	07:04	07:42	14:38 (54)		
	21:13	20:49	20:01	19:05	17:12	16:46	67 15:57 (53)		
4	05:46	06:14	06:50	07:25	07:05	07:44	14:38 (54)		
	21:13	20:48	19:59	19:03	17:11	16:46	70 15:58 (53)		
5	05:46	06:16	06:51	07:27	07:07	07:45	14:38 (54)		
	21:13	20:47	19:57	19:01	17:10	16:46	71 15:59 (53)		
6	05:47	06:17	06:53	07:28	07:08	07:46	14:38 (54)		
	21:12	20:46	19:55	19:00	17:09	16:46	73 16:00 (53)		
7	05:48	06:18	06:54	07:29	07:09	07:47	14:38 (54)		
	21:12	20:44	19:53	18:56	17:07	16:46	76 16:01 (53)		
8	05:48	06:19	20:02 (52)	06:55	07:30	07:11	07:48	14:38 (54)	
	21:12	20:43	3 20:05 (52)	19:52	18:54	17:06	16:45	77 16:02 (53)	
9	05:49	06:20	19:58 (52)	06:56	07:32	07:12	07:49	14:38 (54)	
	21:11	20:41	10 20:08 (52)	19:50	18:52	17:05	16:45	79 16:03 (53)	
10	05:50	06:21	19:56 (52)	06:57	07:33	07:13	07:50	14:38 (54)	
	21:11	20:40	14 20:10 (52)	19:48	18:51	17:04	16:45	79 16:03 (53)	
11	05:51	06:22	19:55 (52)	06:58	07:34	07:15	07:50	14:38 (54)	
	21:10	20:39	16 20:11 (52)	19:46	18:49	17:03	16:45	80 16:04 (53)	
12	05:51	06:24	19:54 (52)	07:00	07:35	07:16	07:51	14:39 (54)	
	21:10	20:37	17 20:11 (52)	19:44	18:47	17:01	16:45	81 16:05 (53)	
13	05:52	06:25	19:53 (52)	07:01	07:37	07:17	07:52	14:39 (54)	
	21:09	20:36	17 20:10 (52)	19:42	18:45	17:00	16:46	82 16:06 (53)	
14	05:53	06:26	19:53 (52)	07:02	07:38	07:19	07:53	14:39 (54)	
	21:09	20:34	16 20:09 (52)	19:41	18:44	16:59	16:46	83 16:06 (53)	
15	05:54	06:27	19:53 (52)	07:03	07:39	07:20	07:54	14:39 (54)	
	21:08	20:33	15 20:08 (52)	19:39	18:42	16:58	16:46	82 16:06 (53)	
16	05:55	06:28	19:52 (52)	07:04	07:40	07:21	07:54	14:40 (54)	
	21:07	20:31	14 20:06 (52)	19:37	18:40	16:57	16:46	83 16:07 (53)	
17	05:56	06:29	19:52 (52)	07:05	07:42	07:23	07:55	14:41 (54)	
	21:06	20:30	13 20:05 (52)	19:35	18:38	16:56	16:46	83 16:08 (53)	
18	05:57	06:31	19:52 (52)	07:07	07:43	07:24	07:56	14:40 (54)	
	21:06	20:28	11 20:03 (52)	19:33	18:37	16:55	16:47	84 16:08 (53)	
19	05:58	06:32	19:52 (52)	07:08	07:44	07:25	07:56	14:41 (54)	
	21:05	20:26	9 20:01 (52)	19:31	18:35	16:55	15 15:06 (54)	16:47	84 16:09 (53)
20	05:59	06:33	19:52 (52)	07:09	07:45	07:27	14:48 (54)	07:57	14:41 (54)
	21:04	20:25	8 20:00 (52)	19:29	18:33	16:54	21 15:09 (54)	16:47	85 16:09 (53)
21	06:00	06:34	19:53 (52)	07:10	07:47	07:28	14:47 (54)	07:58	14:42 (54)
	21:03	20:23	5 19:58 (52)	19:27	18:32	16:53	25 15:12 (54)	16:48	85 16:10 (53)
22	06:01	06:35	19:54 (52)	07:11	07:48	07:29	14:45 (54)	07:58	14:42 (54)
	21:02	20:22	2 19:56 (52)	19:26	18:30	16:52	29 15:14 (54)	16:48	85 16:10 (53)
23	06:02	06:36		07:12	07:49	07:31	14:43 (54)	07:59	14:43 (54)
	21:02	20:20		19:24	18:29	16:51	32 15:15 (54)	16:49	85 16:11 (53)
24	06:03	06:37		07:14	07:51	07:32	14:42 (54)	07:59	14:43 (54)
	21:01	20:18		19:22	18:27	16:51	36 15:18 (54)	16:50	85 16:11 (53)
25	06:04	06:39		07:15	07:52	07:33	14:41 (54)	07:59	14:43 (54)
	21:00	20:16		19:20	18:26	16:50	38 15:19 (54)	16:50	84 16:11 (53)
26	06:05	06:40		07:16	07:53	07:34	14:40 (54)	08:00	14:45 (54)
	20:59	20:15		19:18	18:24	16:50	40 15:20 (54)	16:51	83 16:12 (53)
27	06:06	06:41		07:17	07:55	07:36	14:39 (54)	08:00	14:45 (54)
	20:58	20:13		19:16	18:22	16:49	41 15:20 (54)	16:51	83 16:12 (53)
28	06:07	06:42		07:18	07:56	07:37	14:39 (54)	08:00	14:45 (54)
	20:56	20:11		19:14	18:21	16:48	43 15:22 (54)	16:52	82 16:12 (53)
29	06:08	06:43		07:19	07:57	07:38	14:39 (54)	08:01	14:46 (54)
	20:55	20:10		19:12	18:20	16:48	51 15:50 (53)	16:53	82 16:12 (53)
30	06:09	06:44		07:21	07:59	07:39	14:38 (54)	08:01	14:47 (54)
	20:54	20:08		19:11	18:18	16:47	57 15:52 (53)	16:54	83 16:14 (53)
31	06:10	06:46			08:00			08:01	14:48 (54)
	20:53	20:06			18:17			16:55	81 16:14 (53)
Potential sun hours	470	435	377	341	289	276			
Total, worst case		170			428		2464		
Sun reduction		0.74			0.50		0.49		
Oper. time red.		0.98			0.98		0.98		
Wind dir. red.		0.63			0.59		0.58		
Total reduction		0.45			0.29		0.28		
Total, real		77			123		681		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H150 - H150

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	06:17 20:27	05:44 21:01
2	08:01 16:57	07:43 17:35	07:02 18:12	07:06 19:51	06:15 20:28	05:43 21:02
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:03
5	08:01 16:59	07:39 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04
6	08:01 17:00	07:38 17:40	06:55 18:17	07:00 19:56	06:10 20:33	05:42 21:05
7	08:01 17:02	07:37 17:42	06:53 18:19	07:00 19:58	06:08 20:34	05:41 21:06
8	08:01 17:03	07:36 17:43	06:51 18:20	07:00 19:59	06:07 20:36	05:41 21:06
9	08:01 17:04	07:34 17:45	06:49 18:21	06:53 20:00	06:06 20:37	05:41 21:07
10	08:00 17:05	07:33 17:46	06:48 18:23	06:51 20:01	06:04 20:38	05:40 21:08
11	08:00 17:06	07:32 17:48	06:46 18:24	06:49 20:02	06:03 20:39	05:40 21:08
12	08:00 17:07	07:30 17:49	06:44 18:25	06:48 20:03	06:02 20:40	05:40 21:09
13	07:59 17:08	07:29 17:50	06:42 18:26	06:46 20:05	06:01 20:41	05:40 21:09
14	07:59 17:09	07:27 17:52	06:40 18:28	06:44 20:06	06:00 20:43	05:40 21:10
15	07:58 17:11	07:26 17:53	06:39 18:29	06:42 20:08	05:58 20:44	05:40 21:10
16	07:58 17:12	07:24 17:54	06:37 18:30	06:41 20:09	05:57 20:45	05:40 21:11
17	07:57 17:13	07:23 17:56	06:35 18:32	06:39 20:10	05:56 20:46	05:40 21:11
18	07:56 17:14	07:21 17:57	06:33 18:33	06:37 20:11	05:55 20:47	05:40 21:12
19	07:56 17:16	07:20 17:59	06:31 18:34	06:36 20:12	05:54 20:48	05:40 21:12
20	07:55 17:17	07:18 18:00	06:29 18:35	06:34 20:14	05:53 20:49	05:40 21:12
21	07:54 17:18	07:17 18:00	06:28 18:37	06:32 20:15	06:53 (51) 06:56 (51)	05:52 20:50
22	07:54 17:20	07:15 18:01	06:26 18:38	06:31 20:16	06:51 (51) 06:57 (51)	05:51 20:51
23	07:53 17:21	07:13 18:03	06:24 18:39	06:29 20:17	06:50 (51) 06:59 (51)	05:50 20:52
24	07:52 17:22	07:12 18:04	06:22 18:40	06:27 20:19	06:48 (51) 07:00 (51)	05:50 20:53
25	07:51 17:24	07:10 18:05	06:20 18:42	06:26 20:20	06:46 (51) 07:00 (51)	05:49 20:54
26	07:50 17:25	07:09 18:07	06:18 18:43	06:24 20:21	06:45 (51) 07:01 (51)	05:48 20:55
27	07:49 17:26	07:07 18:08	06:17 18:44	06:23 20:22	06:43 (51) 07:01 (51)	05:47 20:56
28	07:48 17:28	07:05 18:09	06:15 18:45	06:21 20:23	06:42 (51) 07:02 (51)	05:46 20:57
29	07:47 17:29		06:13 18:47	06:20 20:25	06:40 (51) 07:01 (51)	05:46 20:58
30	07:46 17:31		06:11 18:48	06:18 20:26	06:39 (51) 07:02 (51)	05:45 20:59
31	07:45 17:32		06:09 18:49		05:45 21:00	
Potential sun hours	288	292	369	403	458	464
Total, worst case			1059	142	258	
Sun reduction			0.59	0.61	0.65	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.60	0.54	0.54	
Total reduction			0.35	0.32	0.35	
Total, real			368	46	89	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H150 - H150

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:51 (51)	06:47	07:22	07:43 (55)
	21:13	20:52	11 07:02 (51)	20:04	19:09	18:44 (52)
2	05:44	06:12	06:49 (51)	06:48	07:23	07:44 (55)
	21:13	20:51	16 07:05 (51)	20:03	19:07	18:42 (52)
3	05:45	06:13	06:48 (51)	06:49	07:24	07:45 (55)
	21:13	20:50	18 07:06 (51)	20:01	19:05	18:40 (52)
4	05:46	06:14	06:47 (51)	06:50	07:26	07:46 (55)
	21:13	20:48	20 07:07 (51)	19:59	19:03	18:38 (52)
5	05:46	06:16	06:46 (51)	06:51	07:27	07:48 (55)
	21:13	20:47	22 07:08 (51)	19:57	19:01	08:14 (55)
6	05:47	06:17	06:45 (51)	06:53	07:28	07:49 (55)
	21:12	20:46	24 07:09 (51)	19:55	19:00	08:11 (55)
7	05:48	06:18	06:44 (51)	06:54	07:29	07:50 (55)
	21:12	20:44	25 07:09 (51)	19:54	18:56	08:09 (55)
8	05:48	06:19	06:43 (51)	06:55	07:30	07:51 (55)
	21:12	20:43	26 07:09 (51)	19:52	18:54	08:05 (55)
9	05:49	06:20	06:43 (51)	06:56	07:32	07:52 (55)
	21:11	20:42	27 07:10 (51)	19:50	18:52	08:06 (55)
10	05:50	06:21	06:44 (51)	06:57	07:33	07:53 (55)
	21:11	20:40	26 07:10 (51)	19:48	18:51	08:07 (55)
11	05:51	06:22	06:45 (51)	06:58	07:34	07:54 (55)
	21:10	20:39	25 07:10 (51)	19:46	18:49	08:08 (55)
12	05:51	06:24	06:46 (51)	07:00	07:35	07:55 (55)
	21:10	20:37	23 07:09 (51)	19:44	18:47	08:09 (55)
13	05:52	06:25	06:47 (51)	07:01	07:37	07:56 (55)
	21:09	20:36	22 07:09 (51)	19:42	18:45	08:10 (55)
14	05:53	06:26	06:49 (51)	07:02	08:03 (55)	07:38
	21:09	20:34	21 07:10 (51)	19:41	6 08:09 (55)	18:44
15	05:54	06:27	06:50 (51)	07:03	07:58 (55)	07:39
	21:08	20:33	19 07:09 (51)	19:39	16 08:14 (55)	18:42
16	05:55	06:28	06:51 (51)	07:04	07:55 (55)	07:40
	21:07	20:31	18 07:09 (51)	19:37	21 08:16 (55)	18:40
17	05:56	06:29	06:52 (51)	07:05	07:52 (55)	07:42
	21:07	20:30	16 07:08 (51)	19:35	25 08:17 (55)	18:38
18	05:57	06:31	06:53 (51)	07:07	07:51 (55)	07:43
	21:06	20:28	14 07:07 (51)	19:33	40 18:51 (52)	18:37
19	05:58	06:32	06:54 (51)	07:08	07:49 (55)	07:44
	21:05	20:26	11 07:05 (51)	19:31	48 18:54 (52)	18:35
20	05:59	06:33	06:55 (51)	07:09	07:48 (55)	07:45
	21:04	20:25	9 07:04 (51)	19:29	53 18:55 (52)	18:34
21	06:00	06:34	06:56 (51)	07:10	07:46 (55)	07:47
	21:03	20:23	6 07:02 (51)	19:27	58 18:56 (52)	18:32
22	06:01	06:35	06:57 (51)	07:11	07:45 (55)	07:48
	21:02	20:22	2 06:59 (51)	19:26	61 18:56 (52)	18:30
23	06:02	06:36		07:12	07:44 (55)	07:49
	21:02	20:20		19:24	64 18:56 (52)	18:29
24	06:03	06:37		07:14	07:44 (55)	07:51
	21:01	20:18		19:22	65 18:57 (52)	18:27
25	06:04	06:39		07:15	07:44 (55)	07:52
	21:00	20:17		19:20	64 18:55 (52)	18:26
26	06:05	06:40		07:16	07:43 (55)	07:53
	20:59	20:15		19:18	64 18:53 (52)	18:24
27	06:06	06:41		07:17	07:42 (55)	07:55
	20:58	20:13		19:16	62 18:51 (52)	18:22
28	06:07	06:42		07:18	07:42 (55)	07:56
	20:57	20:11		19:14	60 18:49 (52)	18:21
29	06:08	06:43		07:19	07:42 (55)	07:57
	20:55	20:10		19:12	58 18:47 (52)	18:20
30	06:09	06:44		07:21	07:43 (55)	07:59
	20:54	20:08		19:11	55 18:46 (52)	18:18
31	06:10	06:46			08:00	08:01
	20:53	4 06:54 (51)			18:17	16:55
		06:58 (51)				276
Potential sun hours	470	435	377	341	289	276
Total, worst case	4	401	820	253		
Sun reduction	0.76	0.74	0.69	0.63		
Oper. time red.	0.98	0.98	0.98	0.98		
Wind dir. red.	0.54	0.54	0.60	0.61		
Total reduction	0.40	0.39	0.41	0.38		
Total, real	2	158	332	95		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H151 - H151

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December						
1	08:01	07:44	08:06 (58)	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:40						
	16:56	17:34	08:44 (58)	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	08:17 (58)	16:47					
2	08:01	07:43	08:05 (58)	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:41						
	16:57	17:35	08:45 (58)	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	08:18 (58)	16:47					
3	08:01	07:42	08:05 (58)	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:43						
	16:58	17:36	08:46 (58)	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	08:17 (58)	16:47					
4	08:01	07:41	08:04 (58)	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:44						
	16:59	17:38	08:46 (58)	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	08:17 (58)	16:46					
5	08:01	07:40	08:04 (58)	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:45						
	17:00	17:39	08:47 (58)	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	08:17 (58)	16:46					
6	08:01	07:38	08:04 (58)	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:46						
	17:01	17:41	08:47 (58)	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	08:16 (58)	16:46					
7	08:01	07:37	08:03 (58)	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:47						
	17:02	17:42	08:47 (58)	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	08:17 (58)	16:46					
8	08:01	07:36	08:03 (58)	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:48						
	17:03	17:43	08:47 (58)	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	08:16 (58)	16:46					
9	08:01	07:34	08:04 (58)	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:49						
	17:04	17:45	08:48 (58)	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	08:16 (58)	16:46					
10	08:00	07:33	08:03 (58)	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:50						
	17:05	17:46	08:47 (58)	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	08:15 (58)	16:45					
11	08:00	07:32	08:04 (58)	07:46	06:49	06:03	05:40	05:51	06:23	06:59	07:34	07:51						
	17:06	17:48	08:48 (58)	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	08:15 (58)	16:46					
12	08:00	07:30	08:03 (58)	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:51						
	17:07	17:49	08:47 (58)	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	08:14 (58)	16:46					
13	07:59	07:29	08:04 (58)	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:52						
	17:08	17:50	08:47 (58)	19:27	20:05	20:41	21:10	21:09	20:36	19:43	18:45	08:13 (58)	16:46					
14	07:59	07:27	08:05 (58)	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:53						
	17:10	17:52	08:47 (58)	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	08:12 (58)	16:46					
15	07:58	07:26	08:05 (58)	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:54						
	17:11	17:53	08:46 (58)	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	08:11 (58)	16:46					
16	07:58	07:24	08:06 (58)	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:55						
	17:12	17:55	08:46 (58)	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	08:11 (58)	16:46					
17	07:57	07:23	08:06 (58)	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:55						
	17:13	17:56	08:45 (58)	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	08:53 (58)	07:23	25	08:11 (58)	16:46		
18	07:57	07:21	08:07 (58)	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	08:48 (58)	07:24	22	08:09 (58)	16:47		
	17:15	17:57	08:43 (58)	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	17	09:05 (58)	16:56	19	08:07 (58)	16:47	
19	07:56	07:20	08:08 (58)	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	08:45 (58)	07:26	19	07:50 (58)	16:47		
	17:16	17:59	08:43 (58)	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	22	09:07 (58)	16:55	16	08:06 (58)	16:47	
20	07:55	07:18	08:09 (58)	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	08:42 (58)	07:27	16	07:51 (58)	16:47		
	17:17	18:00	08:41 (58)	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	27	09:09 (58)	16:54	12	08:03 (58)	16:48	
21	07:55	07:17	08:11 (58)	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	08:41 (58)	07:28	30	09:11 (58)	16:53	16:48	
	17:19	18:00	08:40 (58)	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	30	09:11 (58)	16:53	16:48	07:58		
22	07:54	08:16 (58)	07:15	08:12 (58)	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	08:39 (58)	07:29	33	09:12 (58)	16:52	16:49
	17:20	18:01	08:28 (58)	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	33	09:12 (58)	16:52	16:49	07:59		
23	07:53	08:15 (58)	07:14	08:14 (58)	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	08:37 (58)	07:31	36	09:13 (58)	16:52	16:49
	17:21	18:03	08:31 (58)	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	36	09:13 (58)	16:52	16:49	07:59		
24	07:52	08:15 (58)	07:12	08:18 (58)	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	08:37 (58)	07:32	37	09:14 (58)	16:51	16:50
	17:23	18:04	08:34 (58)	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	37	09:14 (58)	16:51	16:50	08:00		
25	07:51	08:14 (58)	07:10	08:13 (58)	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	08:36 (58)	07:33	38	09:14 (58)	16:50	16:50
	17:24	18:06	08:36 (58)	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	38	09:14 (58)	16:50	16:50	08:00		
26	07:50	08:13 (58)	07:09	08:13 (58)	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	08:35 (58)	07:34	41	09:16 (58)	16:50	16:51
	17:25	18:07	08:38 (58)	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	41	09:16 (58)	16:50	16:51	08:00		
27	07:49	08:12 (58)	07:07	08:08 (58)	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	08:34 (58)	07:36	42	09:16 (58)	16:50	16:52
	17:27	18:08	08:39 (58)	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	42	09:16 (58)	16:49	16:52	08:01		
28	07:48	08:11 (58)	07:05	08:11 (58)	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	08:33 (58)	07:37	43	09:17 (58)	16:48	16:53
	17:28	18:09	08:41 (58)	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	43	09:16 (58)	16:49	16:52	08:01		
29	07:47	08:09 (58)		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	08:34 (58)	07:38	43	09:17 (58)	16:48	16:54	
	17:29	18:10	08:41 (58)	19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	43	09:17 (58)	16:48	16:54	08:01		
30	07:46	08:08 (58)		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	08:33 (58)	07:39	44	09:17 (58)	16:48	16:54	
	17:31	18:11	08:42 (58)	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	44	09:17 (58)	16:48	16:54	08:01		
31	07:45	08:07 (58)		07:09	05:45	05:45	06:10	06:46	07:22	08:00	08:33 (58)	18:17	44	09:17 (58)	16:55	16:54		
	17:32	18:12	08:43 (58)	19:49	20:27	21:00	20:53	20:06	19:10	18:13	17:17	44	09:17 (58)	16:55	16:55	08:01		
Potential sun hours	288																	
Total, worst case	253	292	369	403	458	464	470	435	377	341	289	678	276					
Sun reduction	0.57	0.59										0.63	0.50					
Oper. time red.	0.98	0.98										0.98	0.98					
Wind dir. red.	0.68	0.68										0.68	0.68					
Total reduction	0.38	0.39										0.42	0.33					
Total, real	96	356										210	225					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H152 - H152

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	08:26 (57)	07:44	07:04	07:24 (58)	07:08
	15	08:41 (57)	17:34	18:11	5	07:29 (58)
2	08:01	08:26 (57)	07:43	07:02	07:22 (58)	07:06
	16	08:42 (57)	17:35	18:12	8	07:30 (58)
3	08:01	08:26 (57)	07:42	07:00	07:21 (58)	07:04
	16	08:42 (57)	17:36	18:14	10	07:31 (58)
4	08:01	08:26 (57)	07:41	06:58	07:19 (58)	07:02
	17	08:43 (57)	17:38	18:15	12	07:31 (58)
5	08:01	08:25 (57)	07:40	06:57	07:17 (58)	07:00
	18	08:43 (57)	17:39	18:16	13	07:30 (58)
6	08:01	08:25 (57)	07:38	06:55	07:15 (58)	06:58
	19	08:44 (57)	17:41	18:18	14	07:29 (58)
7	08:01	08:25 (57)	07:37	06:53	07:14 (58)	06:57
	19	08:44 (57)	17:42	18:19	15	07:29 (58)
8	08:01	08:25 (57)	07:36	07:51	08:13 (58)	06:55
	20	08:45 (57)	17:43	18:20	15	08:28 (58)
9	08:01	08:24 (57)	07:34	07:50	08:14 (58)	06:53
	21	08:45 (57)	17:45	19:21	12	08:26 (58)
10	08:00	08:24 (57)	07:33	07:48	08:16 (58)	06:51
	22	08:46 (57)	17:46	19:23	6	08:22 (58)
11	08:00	08:24 (57)	07:32	07:46	06:50	06:03
	23	08:47 (57)	17:48	19:24	20:03	20:39
12	08:00	08:23 (57)	07:30	07:44	06:48	06:02
	24	08:47 (57)	17:49	19:25	20:04	20:40
13	07:59	08:23 (57)	07:29	07:42	06:46	06:01
	25	08:48 (57)	17:50	19:27	20:05	20:42
14	07:59	08:22 (57)	07:27	07:41	06:44	06:00
	25	08:47 (57)	17:52	19:28	20:06	20:43
15	07:58	08:21 (57)	07:26	07:39	06:43	05:59
	26	08:47 (57)	17:53	19:29	20:08	20:44
16	07:58	08:22 (57)	07:25	07:37	06:41	05:58
	26	08:48 (57)	17:55	19:30	20:09	20:45
17	07:57	08:22 (57)	07:23	07:35	06:39	05:56
	26	08:48 (57)	17:56	19:32	20:10	20:46
18	07:57	08:23 (57)	07:21	07:33	06:37	05:55
	25	08:48 (57)	17:57	19:33	20:11	20:47
19	07:56	08:24 (57)	07:20	07:31	06:36	05:54
	24	08:48 (57)	17:59	19:34	20:13	20:48
20	07:55	08:25 (57)	07:18	07:30	06:34	05:53
	23	08:48 (57)	18:00	19:35	20:14	20:49
21	07:55	08:25 (57)	07:17	07:28	06:32	05:52
	22	08:47 (57)	18:00	19:37	20:15	20:50
22	07:54	08:26 (57)	07:15	07:26	06:31	05:52
	21	08:47 (57)	18:02	19:38	20:16	20:51
23	07:53	08:27 (57)	07:14	07:24	06:29	05:51
	19	08:46 (57)	18:03	19:39	20:17	20:52
24	07:52	08:29 (57)	07:12	07:22	06:28	05:50
	17	08:46 (57)	18:04	19:40	20:19	20:54
25	07:51	08:31 (57)	07:10	07:20	06:26	05:49
	14	08:45 (57)	18:06	19:42	20:20	20:55
26	07:50	08:33 (57)	07:09	07:19	06:24	05:48
	10	08:43 (57)	18:07	19:43	20:21	20:56
27	07:49		07:07	07:17	06:23	05:47
			18:08	19:44	20:22	20:56
28	07:48		07:05	07:15	06:21	05:47
			07:26 (58)	19:45	20:24	20:57
29	07:47			07:13	06:20	05:46
			07:29 (58)	19:47	20:25	20:58
30	07:46			07:11	06:18	05:45
				19:48	20:26	20:59
31	07:45			07:09		05:45
				19:49		21:00
Potential sun hours	288	292	369	403	458	464
Total, worst case	533	3	110			
Sun reduction	0.57	0.59	0.59			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.70	0.62	0.62			
Total reduction	0.39	0.36	0.36			
Total, real	207	1	40			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H152 - H152

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:01	07:40
	21:13	20:52	20:04	19:09	17:15	16:47
2	05:45	06:12	06:48	07:23	07:03	07:41
	21:13	20:51	20:03	19:07	17:14	16:47
3	05:45	06:14	06:49	07:24	07:04	07:43
	21:13	20:50	20:01	19:05	17:13	16:47
4	05:46	06:15	06:50	07:26	07:53 (58)	07:05
	21:13	20:48	19:59	19:03	9 08:02 (58)	17:11
5	05:46	06:16	06:52	07:27	07:50 (58)	07:07
	21:13	20:47	19:57	19:02	14 08:04 (58)	17:10
6	05:47	06:17	06:53	07:28	07:49 (58)	07:08
	21:12	20:46	19:55	19:00	15 08:04 (58)	17:09
7	05:48	06:18	06:54	07:29	07:50 (58)	07:10
	21:12	20:44	19:54	18:56	15 08:05 (58)	17:07
8	05:49	06:19	06:55	07:31	07:52 (58)	07:11
	21:12	20:43	19:52	18:54	14 08:06 (58)	17:06
9	05:49	06:20	06:56	07:32	07:53 (58)	07:12
	21:11	20:42	19:50	18:53	12 08:05 (58)	17:05
10	05:50	06:21	06:57	07:33	07:54 (58)	07:14
	21:11	20:40	19:48	18:51	11 08:05 (58)	17:04
11	05:51	06:23	06:59	07:34	07:55 (58)	07:15
	21:10	20:39	19:46	18:49	9 08:04 (58)	17:03
12	05:52	06:24	07:00	07:35	07:57 (58)	07:16
	21:10	20:37	19:44	18:47	7 08:04 (58)	17:02
13	05:52	06:25	07:01	07:37	07:58 (58)	07:18
	21:09	20:36	19:43	18:46	4 08:02 (58)	17:01
14	05:53	06:26	07:02	07:38	07:59 (58)	07:19
	21:09	20:34	19:41	18:44	1 08:00 (58)	17:00
15	05:54	06:27	07:03	07:39	07:20	07:54
	21:08	20:33	19:39	18:42	16:59	16:46
16	05:55	06:28	07:04	07:41	07:22	07:55
	21:07	20:31	19:37	18:40	16:58	10 08:16 (57)
17	05:56	06:30	07:06	07:42	07:23	08:04 (57)
	21:07	20:30	19:35	18:39	16:57	14 08:18 (57)
18	05:57	06:31	07:07	07:43	07:24	08:03 (57)
	21:06	20:28	19:33	18:37	16:56	17 08:20 (57)
19	05:58	06:32	07:08	07:44	07:26	08:02 (57)
	21:05	20:27	19:31	18:35	16:55	19 08:21 (57)
20	05:59	06:33	07:09	07:46	07:27	08:01 (57)
	21:04	20:25	19:29	18:34	16:54	21 08:22 (57)
21	06:00	06:34	07:10	07:47	07:28	08:01 (57)
	21:03	20:23	19:28	18:32	16:53	22 08:23 (57)
22	06:01	06:35	07:11	07:48	07:29	08:01 (57)
	21:03	20:22	19:26	18:30	16:52	23 08:24 (57)
23	06:02	06:37	07:13	07:50	07:31	08:00 (57)
	21:02	20:20	19:24	18:29	16:52	24 08:24 (57)
24	06:03	06:38	07:14	07:51	07:32	08:01 (57)
	21:01	20:18	19:22	18:27	16:51	25 08:26 (57)
25	06:04	06:39	07:15	07:52	07:33	08:00 (57)
	21:00	20:17	19:20	18:26	16:50	26 08:26 (57)
26	06:05	06:40	07:16	07:53	07:34	08:00 (57)
	20:59	20:15	19:18	18:24	16:50	26 08:26 (57)
27	06:06	06:41	07:17	07:55	07:36	08:01 (57)
	20:58	20:13	19:16	18:23	16:49	26 08:27 (57)
28	06:07	06:42	07:18	07:56	07:37	08:02 (57)
	20:57	20:12	19:14	18:21	16:49	25 08:27 (57)
29	06:08	06:43	07:20	07:57	07:38	08:03 (57)
	20:56	20:10	19:13	18:20	16:48	25 08:28 (57)
30	06:09	06:45	07:21	07:59	07:39	08:04 (57)
	20:54	20:08	19:11	18:18	16:48	24 08:28 (57)
31	06:10	06:46		08:00		08:01
	20:53	20:06		18:17		16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case				111	327	455
Sun reduction				0.63	0.50	0.49
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.62	0.70	0.70
Total reduction				0.38	0.34	0.33
Total, real				43	111	152

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H153 - H153

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H154 - H154

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H155 - H155

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H156 - H156

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H157 - H157

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H161 - H161

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:23	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H163 - H163

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H165 - H165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H166 - H166

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:07	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:12	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:54	20:07		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H167 - H167

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H168 - H168

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H169 - H169

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:14	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	06:18	05:45	05:44	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	19:48	20:26	20:59	21:14	21:14	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:09	07:19	06:19	05:45	05:45	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	19:49	20:27	21:00	21:14	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H170 - H170

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:46 21:13	06:14 20:48	06:50 19:59	07:26 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:16 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:10 20:33	05:42 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:48 21:12	06:18 20:44	06:54 19:54	07:29 18:56	07:10 17:07	07:47 16:46
8	08:01 17:03	07:36 17:43	06:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:04	07:34 17:45	06:50 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	06:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:48	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:51 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:03	07:51 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:48 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:24 20:37	07:00 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	06:42 19:27	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:46
14	07:59 17:10	07:27 17:52	06:41 19:28	06:44 20:06	06:00 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	06:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	06:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:32	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:39	07:23 16:56	07:55 16:46
18	07:57 17:15	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	06:31 19:34	06:36 20:13	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:27	07:08 19:31	07:44 18:35	07:26 16:55	07:57 16:47
20	07:55 17:17	07:18 18:00	06:30 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:59 21:04	06:33 20:25	07:09 19:29	07:46 18:34	07:27 16:54	07:57 16:47
21	07:55 17:18	07:17 18:00	06:28 19:37	06:32 20:15	05:52 20:50	05:40 21:13	06:00 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	06:26 19:38	06:31 20:16	05:51 20:51	05:41 21:13	06:01 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:14 18:03	06:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:02 21:02	06:36 20:20	07:12 19:24	07:49 18:29	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	05:50 20:54	05:41 21:13	06:03 21:01	06:38 20:18	07:14 19:22	07:51 18:27	07:32 16:51	07:59 16:50
25	07:51 17:24	07:10 18:05	06:20 19:42	06:26 20:20	05:49 20:55	05:41 21:13	06:04 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:33 16:50	08:00 16:50
26	07:50 17:25	07:09 18:07	06:18 19:43	06:24 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:50	08:00 16:51
27	07:49 17:27	07:07 18:08	06:17 19:44	06:23 20:22	05:47 20:56	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	06:15 19:45	06:21 20:24	05:46 20:57	05:42 21:14	06:07 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:47	06:13 20:25	06:20 20:58	05:46 20:58	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	07:57 18:20	07:38 16:48	08:01 16:53
30	07:46 17:31	07:03 19:48	06:11 20:26	06:18 20:59	05:45 20:59	05:43 21:14	06:09 20:54	06:45 20:08	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:54
31	07:45 17:32	07:02 19:49	06:09 20:27	06:16 21:00	05:45 21:00	06:10 20:53	06:46 20:06	06:46 20:06	08:00 18:17	08:00 16:55	08:01 16:55	08:01 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H171 - H171

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including sunrise/sunset times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H172 - H172

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	07:44	07:03	17:04 (49)	07:07	06:17
	16:56	17:33	18:11	45 17:49 (49)	19:50	20:27
2	08:01	07:43	07:02	17:03 (49)	07:06	06:15
	16:57	17:35	18:12	47 17:50 (49)	19:51	20:28
3	08:01	07:42	07:00	17:03 (49)	07:04	06:14
	16:57	17:36	18:13	48 17:51 (49)	19:53	20:30
4	08:01	07:41	06:58	17:02 (49)	07:02	06:12
	16:58	17:38	18:15	49 17:51 (49)	19:54	20:31
5	08:01	07:39	06:57	17:01 (49)	07:00	06:11
	16:59	17:39	18:16	50 17:51 (49)	19:55	20:32
6	08:01	07:38	06:55	17:00 (49)	06:58	06:10
	17:00	17:40	18:17	51 17:51 (49)	19:56	20:33
7	08:01	07:37	06:53	17:00 (49)	06:56	06:08
	17:01	17:42	18:19	51 17:51 (49)	19:58	20:34
8	08:01	07:36	07:51	18:00 (49)	06:55	06:07
	17:03	17:43	18:20	51 18:51 (49)	19:59	20:36
9	08:01	07:34	07:49	18:00 (49)	06:53	06:06
	17:04	17:45	19:21	51 18:51 (49)	20:00	20:37
10	08:00	08:24 (51)	07:33	07:48	18:00 (49)	06:51
	17:05	1 08:25 (51)	17:46	19:23	51 18:51 (49)	20:01
11	08:00	08:23 (51)	07:32	07:46	17:59 (49)	06:49
	17:06	3 08:26 (51)	17:47	19:24	51 18:50 (49)	20:03
12	08:00	08:23 (51)	07:30	07:44	17:59 (49)	06:48
	17:07	5 08:28 (51)	17:49	19:25	50 18:49 (49)	20:04
13	07:59	08:23 (51)	07:29	07:42	18:00 (49)	06:46
	17:08	6 08:29 (51)	17:50	19:26	50 18:50 (49)	20:05
14	07:59	08:22 (51)	07:27	07:40	18:00 (49)	06:44
	17:09	8 08:30 (51)	17:52	19:28	49 18:49 (49)	20:06
15	07:58	08:21 (51)	07:26	07:39	18:00 (49)	06:42
	17:11	9 08:30 (51)	17:53	19:29	48 18:48 (49)	20:08
16	07:58	08:21 (51)	07:24	07:37	18:01 (49)	06:41
	17:12	10 08:31 (51)	17:54	19:30	46 18:47 (49)	20:09
17	07:57	08:20 (51)	07:23	07:35	18:01 (49)	06:39
	17:13	12 08:32 (51)	17:56	19:32	44 18:45 (49)	20:10
18	07:57	08:19 (51)	07:21	07:33	18:02 (49)	06:37
	17:14	13 08:32 (51)	17:57	19:33	42 18:44 (49)	20:11
19	07:56	08:19 (51)	07:20	07:31	18:03 (49)	06:36
	17:16	14 08:33 (51)	17:59	19:34	39 18:42 (49)	20:12
20	07:55	08:18 (51)	07:18	07:29	18:05 (49)	06:34
	17:17	16 08:34 (51)	18:00	19:35	37 18:42 (49)	20:14
21	07:54	08:17 (51)	07:17	17:21 (49)	07:28	18:06 (49)
	17:18	17 08:34 (51)	18:00	15 17:36 (49)	19:37	34 18:40 (49)
22	07:54	08:16 (51)	07:15	17:17 (49)	07:26	18:07 (49)
	17:20	18 08:34 (51)	18:01	22 17:39 (49)	19:38	30 18:37 (49)
23	07:53	08:15 (51)	07:13	17:13 (49)	07:24	18:09 (49)
	17:21	19 08:34 (51)	18:03	27 17:40 (49)	19:39	26 18:35 (49)
24	07:52	08:14 (51)	07:12	17:12 (49)	07:22	18:12 (49)
	17:22	20 08:34 (51)	18:04	30 17:42 (49)	19:40	19 18:31 (49)
25	07:51	08:14 (51)	07:10	17:10 (49)	07:20	18:17 (49)
	17:24	21 08:35 (51)	18:05	34 17:44 (49)	19:42	8 18:25 (49)
26	07:50	08:14 (51)	07:09	17:08 (49)	07:18	18:25 (49)
	17:25	20 08:34 (51)	18:07	37 17:45 (49)	19:43	20:21
27	07:49	08:15 (51)	07:07	17:07 (49)	07:17	18:23
	17:26	19 08:34 (51)	18:08	40 17:47 (49)	19:44	20:22
28	07:48	08:15 (51)	07:05	17:06 (49)	07:15	18:21
	17:28	18 08:33 (51)	18:09	42 17:48 (49)	19:45	20:23
29	07:47	08:16 (51)		07:13	07:13	18:20
	17:29	16 08:32 (51)		19:47	20:25	30 07:16 (50)
30	07:46	08:18 (51)		07:11	07:11	18:18
	17:31	13 08:31 (51)		19:48	20:26	29 07:16 (50)
31	07:45	08:21 (51)		07:09	07:09	18:16
	17:32	8 08:29 (51)		19:49	21:00	21:00
Potential sun hours	288	292	369	403	458	464
Total, worst case	286	247	1067	411	143	
Sun reduction	0.57	0.59	0.59	0.61	0.65	
Oper. time red.	0.98	0.98	0.98	0.98	0.98	
Wind dir. red.	0.69	0.54	0.54	0.53	0.53	
Total reduction	0.39	0.31	0.31	0.32	0.34	
Total, real	110	77	334	132	49	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H172 - H172

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:11	06:47	07:22	17:39 (49)	07:01	07:40	08:05 (51)
	21:13	20:52	20:04	19:09	50 18:29 (49)	17:15	16:47	3 08:08 (51)
2	05:44	06:12	06:48	07:23	17:38 (49)	07:03	07:41	08:07 (51)
	21:13	20:51	20:03	19:07	51 18:29 (49)	17:14	16:47	2 08:09 (51)
3	05:45	06:13	06:49	07:24	17:37 (49)	07:04	07:43	
	21:13	20:50	20:01	19:05	51 18:28 (49)	17:12	16:46	
4	05:46	06:14	06:50	07:26	17:38 (49)	07:05	07:44	
	21:13	20:48	19:59	19:03	51 18:29 (49)	17:11	16:46	
5	05:46	06:16	07:09 (50)	06:51	07:27	17:37 (49)	07:07	07:45
	21:13	20:47	3 07:12 (50)	19:57	19:01	51 18:28 (49)	17:10	16:46
6	05:47	06:17	07:04 (50)	06:53	07:28	17:37 (49)	07:08	07:46
	21:12	20:46	12 07:16 (50)	19:55	19:00	51 18:28 (49)	17:09	16:46
7	05:48	06:18	07:02 (50)	06:54	07:29	17:36 (49)	07:09	07:47
	21:12	20:44	17 07:19 (50)	19:54	18:56	51 18:27 (49)	17:07	16:46
8	05:48	06:19	07:00 (50)	06:55	07:30	17:36 (49)	07:11	07:48
	21:12	20:43	20 07:20 (50)	19:52	18:54	50 18:26 (49)	17:06	16:45
9	05:49	06:20	06:59 (50)	06:56	07:32	17:37 (49)	07:12	07:49
	21:11	20:42	22 07:21 (50)	19:50	18:52	49 18:26 (49)	17:05	16:45
10	05:50	06:21	06:57 (50)	06:57	07:33	17:37 (49)	07:13	07:50
	21:11	20:40	25 07:22 (50)	19:48	18:51	48 18:25 (49)	17:04	16:45
11	05:51	06:22	06:56 (50)	06:58	07:34	17:37 (49)	07:15	07:51 (51)
	21:10	20:39	27 07:23 (50)	19:46	18:49	47 18:24 (49)	17:03	9 08:00 (51)
12	05:51	06:24	06:55 (50)	07:00	07:35	17:38 (49)	07:16	07:50 (51)
	21:10	20:37	28 07:23 (50)	19:44	18:47	46 18:24 (49)	17:01	13 08:03 (51)
13	05:52	06:25	06:54 (50)	07:01	07:37	17:38 (49)	07:18	07:52
	21:09	20:36	30 07:24 (50)	19:42	18:45	44 18:22 (49)	17:00	16 08:04 (51)
14	05:53	06:26	06:54 (50)	07:02	07:38	17:38 (49)	07:19	07:48 (51)
	21:09	20:34	31 07:25 (50)	19:41	18:44	42 18:20 (49)	16:59	18 08:06 (51)
15	05:54	06:27	06:54 (50)	07:03	07:39	17:40 (49)	07:20	07:47 (51)
	21:08	20:33	31 07:25 (50)	19:39	18:42	39 18:19 (49)	16:58	19 08:06 (51)
16	05:55	06:28	06:53 (50)	07:04	07:40	17:41 (49)	07:22	07:47 (51)
	21:07	20:31	32 07:25 (50)	19:37	18:40	35 18:16 (49)	16:57	20 08:07 (51)
17	05:56	06:29	06:53 (50)	07:05	07:42	17:42 (49)	07:23	07:47 (51)
	21:07	20:30	32 07:25 (50)	19:35	18:38	32 18:14 (49)	16:56	21 08:08 (51)
18	05:57	06:30	06:53 (50)	07:07	07:43	17:44 (49)	07:24	07:48 (51)
	21:06	20:28	32 07:25 (50)	19:33	18:37	29 18:13 (49)	16:55	20 08:08 (51)
19	05:58	06:32	06:54 (50)	07:08	07:44	17:46 (49)	07:25	07:50 (51)
	21:05	20:26	30 07:24 (50)	19:31	18 18:18 (49)	18:35	25 18:11 (49)	19 08:09 (51)
20	05:59	06:33	06:55 (50)	07:09	07:46	17:48 (49)	07:27	07:51 (51)
	21:04	20:25	29 07:24 (50)	19:29	24 18:20 (49)	18:34	21 18:09 (49)	18 08:09 (51)
21	06:00	06:34	06:56 (50)	07:10	07:47	17:53 (49)	07:28	07:53 (51)
	21:03	20:23	27 07:23 (50)	19:27	29 18:22 (49)	18:32	12 18:05 (49)	17 08:10 (51)
22	06:00	06:35	06:57 (50)	07:11	07:48	17:51 (49)	07:48	07:54 (51)
	21:03	20:22	25 07:22 (50)	19:26	33 18:24 (49)	18:30	16:52	16 08:10 (51)
23	06:01	06:36	06:59 (50)	07:12	07:49	17:49 (49)	07:49	07:55 (51)
	21:02	20:20	24 07:23 (50)	19:24	36 18:25 (49)	18:29	16:51	14 08:09 (51)
24	06:03	06:37	07:00 (50)	07:14	07:51	17:48 (49)	07:51	07:57 (51)
	21:01	20:18	21 07:21 (50)	19:22	38 18:26 (49)	18:27	16:51	13 08:10 (51)
25	06:04	06:39	07:01 (50)	07:15	07:52	17:46 (49)	07:52	07:58 (51)
	21:00	20:17	19 07:20 (50)	19:20	41 18:27 (49)	18:26	16:50	12 08:10 (51)
26	06:05	06:40	07:02 (50)	07:16	07:53	17:44 (49)	07:53	07:59 (51)
	20:59	20:15	17 07:19 (50)	19:18	44 18:28 (49)	18:24	16:50	10 08:09 (51)
27	06:06	06:41	07:03 (50)	07:17	07:55	17:43 (49)	07:55	08:01 (51)
	20:58	20:13	14 07:17 (50)	19:16	45 18:28 (49)	18:22	16:49	9 08:10 (51)
28	06:07	06:42	07:04 (50)	07:18	07:56	17:41 (49)	07:56	08:02 (51)
	20:57	20:11	10 07:14 (50)	19:14	47 18:28 (49)	18:21	16:48	8 08:10 (51)
29	06:08	06:43	07:05 (50)	07:19	07:57	17:40 (49)	07:57	08:03 (51)
	20:55	20:10	6 07:11 (50)	19:12	48 18:28 (49)	18:20	16:48	6 08:09 (51)
30	06:09	06:44	07:07 (50)	07:21	07:59	17:40 (49)	07:59	08:04 (51)
	20:54	20:08	19:11	49 18:29 (49)	18:18	16:47	5 08:09 (51)	16:54
31	06:10	06:46			08:00			08:01
	20:53	20:06			18:17			16:55
Potential sun hours	470	435	377	341	289	276		
Total, worst case		564	452	875	283	5		
Sun reduction		0.74	0.69	0.63	0.50	0.49		
Oper. time red.		0.98	0.98	0.98	0.98	0.98		
Wind dir. red.		0.53	0.54	0.54	0.69	0.69		
Total reduction		0.39	0.37	0.33	0.34	0.33		
Total, real		219	166	293	96	2		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H173 - H173

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	07:44	08:06 (51)	07:03	07:07	06:17
	16:56	17:33	25 17:08 (52)	18:11	19:50	24 20:04 (49)
2	08:01	07:43	08:05 (51)	07:02	07:05	06:15
	16:57	17:35	29 17:09 (52)	18:12	19:51	25 20:05 (49)
3	08:01	07:42	08:04 (51)	07:00	07:04	06:14
	16:57	17:36	32 17:11 (52)	18:13	19:53	23 20:04 (49)
4	08:01	07:41	08:02 (51)	06:58	07:02	06:12
	16:58	17:38	37 17:12 (52)	18:15	19:54	21 20:02 (49)
5	08:01	07:39	08:01 (51)	06:57	07:00	06:11
	16:59	17:39	40 17:14 (52)	18:16	19:55	19 20:02 (49)
6	08:01	07:38	08:00 (51)	06:55	06:58	06:10
	17:00	17:40	43 17:16 (52)	18:17	19:56	16 20:00 (49)
7	08:01	07:37	07:58 (51)	06:53	06:56	06:08
	17:01	17:42	46 17:16 (52)	18:19	19:58	13 19:59 (49)
8	08:01	07:36	07:57 (51)	07:51	06:55	06:07
	17:03	17:43	45 17:15 (52)	18:20	19:59	7 19:55 (49)
9	08:01	07:34	07:56 (51)	07:49	06:53	06:06
	17:04	17:45	42 17:13 (52)	19:21	20:00	20:37
10	08:00	07:33	07:54 (51)	07:48	06:51	06:04
	17:05	17:46	36 08:30 (51)	19:23	20:01	20:38
11	08:00	07:32	07:53 (51)	07:46	06:49	06:03
	17:06	17:47	38 08:31 (51)	19:24	20:03	20:39
12	08:00	07:30	07:51 (51)	07:44	06:48	06:02
	17:07	17:49	40 08:31 (51)	19:25	20:04	20:40
13	07:59	07:29	07:50 (51)	07:42	06:46	06:01
	17:08	17:50	41 08:31 (51)	19:26	20:05	20:41
14	07:59	07:27	07:49 (51)	07:40	06:44	06:00
	17:09	17:52	42 08:31 (51)	19:28	20:06	20:43
15	07:58	07:26	07:50 (51)	07:39	06:42	05:58
	17:11	17:53	41 08:31 (51)	19:29	20:08	20:44
16	07:58	07:24	07:49 (51)	07:37	06:41	05:57
	17:12	17:54	42 08:31 (51)	19:30	20:09	20:45
17	07:57	07:23	07:50 (51)	07:35	06:39	05:56
	17:13	17:56	41 08:31 (51)	19:32	20:10	20:46
18	07:56	07:21	07:50 (51)	07:33	06:37	05:55
	17:14	17:57	40 08:30 (51)	19:33	20:11	20:47
19	07:56	07:20	07:51 (51)	07:31	06:36	19:47 (49)
	17:16	17:59	39 08:30 (51)	19:34	20:12	3 19:50 (49)
20	07:55	07:18	07:51 (51)	07:29	06:34	19:45 (49)
	17:17	18:00	38 08:29 (51)	19:35	20:14	6 19:51 (49)
21	07:54	07:17	07:52 (51)	07:28	06:32	19:44 (49)
	17:18	18:00	37 08:29 (51)	19:37	20:15	9 19:53 (49)
22	07:54	07:15	07:53 (51)	07:26	06:31	19:43 (49)
	17:20	18:01	34 08:27 (51)	19:38	20:16	10 19:53 (49)
23	07:53	07:13	07:53 (51)	07:24	06:29	19:41 (49)
	17:21	18:03	33 08:26 (51)	19:39	20:17	13 19:54 (49)
24	07:52	07:12	07:55 (51)	07:22	06:27	19:41 (49)
	17:22	18:04	30 08:25 (51)	19:40	20:19	15 19:56 (49)
25	07:51	07:10	07:56 (51)	07:20	06:26	19:40 (49)
	17:24	18:05	27 08:23 (51)	19:42	20:20	16 19:56 (49)
26	07:50	07:09	07:58 (51)	07:18	06:24	19:40 (49)
	17:25	18:07	22 08:20 (51)	19:43	20:21	18 19:58 (49)
27	07:49	07:07	08:00 (51)	07:17	06:23	19:39 (49)
	17:26	18:08	17 08:17 (51)	19:44	20:22	20 19:59 (49)
28	07:48	16:59 (52)	07:05	08:05 (51)	07:15	06:21
	17:28	2 17:01 (52)	18:09	8 08:13 (51)	19:45	20:23
29	07:47	08:09 (51)			07:13	06:20
	17:29	8 17:03 (52)			19:47	20:25
30	07:46	08:08 (51)			07:11	06:18
	17:31	14 17:04 (52)			19:48	20:26
31	07:45	08:07 (51)			07:09	06:17
	17:32	20 17:06 (52)			19:49	20:27
Potential sun hours	288	292	369	403	458	464
Total, worst case	44	985		175	148	
Sun reduction	0.57	0.59		0.61	0.65	
Oper. time red.	0.98	0.98		0.98	0.98	
Wind dir. red.	0.62	0.65		0.62	0.62	
Total reduction	0.35	0.38		0.37	0.40	
Total, real	15	372		65	59	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H173 - H173

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:01	07:24 (51)
	21:13	20:52	20:04	19:09	17:15	36 08:00 (51)
2	05:44	06:12	06:48	07:23	07:03	07:25 (51)
	21:13	20:51	20:03	19:07	17:14	42 16:42 (52)
3	05:45	06:13	06:49	07:24	07:04	07:27 (51)
	21:13	20:50	20:01	19:05	17:12	44 16:45 (52)
4	05:46	06:14	06:50	07:25	07:05	07:28 (51)
	21:13	20:48	19:59	19:03	17:11	45 16:46 (52)
5	05:46	06:16	19:57 (49)	06:51	07:27	07:07
	21:13	20:47	20:07 (49)	19:57	19:01	17:10
6	05:47	06:17	19:55 (49)	06:53	07:28	07:08
	21:12	20:46	20:09 (49)	19:55	19:00	17:09
7	05:48	06:18	19:53 (49)	06:54	07:29	07:09
	21:12	20:44	20:11 (49)	19:54	18:56	17:07
8	05:48	06:19	19:52 (49)	06:55	07:30	07:11
	21:12	20:43	20:12 (49)	19:52	18:54	17:06
9	05:49	06:20	19:51 (49)	06:56	07:32	07:12
	21:11	20:42	20:12 (49)	19:50	18:52	17:05
10	05:50	06:21	19:49 (49)	06:57	07:33	07:13
	21:11	20:40	20:13 (49)	19:48	18:51	17:04
11	05:51	06:22	19:49 (49)	06:58	07:34	07:15
	21:10	20:39	20:13 (49)	19:46	18:49	17:03
12	05:51	06:24	19:48 (49)	07:00	07:35	07:16
	21:10	20:37	20:11 (49)	19:44	18:47	17:01
13	05:52	06:25	19:47 (49)	07:01	07:37	07:17
	21:09	20:36	20:10 (49)	19:42	18:45	17:00
14	05:53	06:26	19:48 (49)	07:02	07:38	08:35 (51)
	21:09	20:34	20:09 (49)	19:41	18:44	13 08:48 (51)
15	05:54	06:27	19:47 (49)	07:03	07:39	08:31 (51)
	21:08	20:33	20:08 (49)	19:39	18:42	20 08:51 (51)
16	05:55	06:28	19:47 (49)	07:04	07:40	08:30 (51)
	21:07	20:31	19:20:06 (49)	19:37	18:40	24 08:54 (51)
17	05:56	06:29	19:47 (49)	07:05	07:42	08:27 (51)
	21:07	20:30	18:20:05 (49)	19:35	18:38	28 08:55 (51)
18	05:57	06:30	19:47 (49)	07:06	07:43	08:25 (51)
	21:06	20:28	16 20:03 (49)	19:33	18:37	31 08:56 (51)
19	05:58	06:32	19:47 (49)	07:08	07:44	08:25 (51)
	21:05	20:26	14 20:01 (49)	19:31	18:35	33 08:58 (51)
20	05:59	06:33	19:47 (49)	07:09	07:45	08:23 (51)
	21:04	20:25	13 20:00 (49)	19:29	18:33	35 08:58 (51)
21	05:59	06:34	19:47 (49)	07:10	07:47	08:23 (51)
	21:03	20:23	11 19:58 (49)	19:27	18:32	37 09:00 (51)
22	06:00	06:35	19:48 (49)	07:11	07:48	08:21 (51)
	21:02	20:22	8 19:56 (49)	19:26	18:30	39 09:00 (51)
23	06:01	06:36	19:50 (49)	07:12	07:49	08:20 (51)
	21:02	20:20	5 19:55 (49)	19:24	18:29	40 09:00 (51)
24	06:03	06:37	19:51 (49)	07:14	07:51	08:20 (51)
	21:01	20:18	3 19:54 (49)	19:22	18:27	41 09:01 (51)
25	06:04	06:39		07:15	07:52	08:20 (51)
	21:00	20:17		19:20	18:26	41 09:01 (51)
26	06:05	06:40		07:16	07:53	08:19 (51)
	20:59	20:15		19:18	18:24	41 09:00 (51)
27	06:06	06:41		07:17	07:55	08:19 (51)
	20:58	20:13		19:16	18:22	42 09:01 (51)
28	06:07	06:42		07:18	07:56	08:19 (51)
	20:57	20:11		19:14	18:21	42 09:01 (51)
29	06:08	06:43		07:19	07:57	08:20 (51)
	20:55	20:10		19:12	18:19	41 09:01 (51)
30	06:09	06:44		07:21	07:59	08:21 (51)
	20:54	20:08		19:11	18:18	40 09:01 (51)
31	06:10	06:46			08:00	08:23 (51)
	20:53	20:06			18:17	38 09:01 (51)
Potential sun hours	470	435	377	341	289	276
Total, worst case		326		626	413	
Sun reduction		0.74		0.63	0.50	
Oper. time red.		0.98		0.98	0.98	
Wind dir. red.		0.62		0.67	0.63	
Total reduction		0.45		0.41	0.31	
Total, real		147		257	128	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H174 - H174

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	19:22 (51) 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04		07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	6 19:21 (51) 20:28	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:02	8 19:24 (51) 19:32 (51)	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	8 19:22 (51) 20:29	05:43 21:03	05:45 21:13	06:13 20:49	06:49 20:01	13 19:21 (51) 19:34 (51)	07:24 19:05	07:04 17:12	07:42 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	9 19:21 (51) 20:31	06:12 21:03	05:42 21:13	06:14 20:48	06:50 19:59	15 19:21 (51) 19:34 (51)	07:25 19:03	07:05 17:11	07:43 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	11 19:21 (51) 20:32	06:11 21:04	05:42 21:12	06:15 20:47	06:51 19:57	14 19:18 (51) 19:32 (51)	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	12 19:20 (51) 20:33	06:09 21:05	05:42 21:12	06:17 20:46	06:52 19:55	14 19:17 (51) 19:31 (51)	07:28 18:58	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	14 19:21 (51) 20:34	06:08 21:06	05:41 21:12	06:18 20:44	06:54 19:53	13 19:16 (51) 19:29 (51)	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:55 19:59	14 19:22 (51) 20:35	06:07 21:06	05:48 21:11	06:19 20:43	06:55 19:52	12 19:15 (51) 19:27 (51)	07:30 18:54	07:11 17:06	07:48 16:45
9	08:00 17:04	07:34 17:45	07:49 19:21	06:53 20:00	13 19:23 (51) 20:37	06:06 21:07	05:49 21:11	06:20 20:41	06:56 19:50	10 19:15 (51) 19:25 (51)	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	07:48 19:22	06:51 20:01	8 19:25 (51) 20:38	06:04 21:08	05:50 21:11	06:21 20:40	06:57 19:48	9 19:14 (51) 19:23 (51)	07:33 18:50	07:13 17:04	07:49 16:45
11	08:00 17:06	07:31 17:47	07:46 19:24	06:49 20:02	8 19:33 (51) 20:39	20:38 21:08	05:40 21:10	06:22 20:39	06:58 19:46	7 19:22 (51) 19:31 (51)	07:34 18:49	07:15 17:02	07:50 16:45
12	07:59 17:07	07:30 17:49	07:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	7 19:16 (51) 19:20 (51)	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:01 20:41	05:40 21:09	05:52 21:09	06:25 20:36	07:01 19:42	4 19:17 (51) 19:18 (51)	07:36 18:45	07:17 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:42	05:40 21:10	05:53 21:08	06:26 20:34	07:02 19:40	1 19:18 (51)	07:38 18:43	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:07	05:58 20:44	05:40 21:10	05:54 21:08	06:27 20:33	07:03 19:39		07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37		07:40 18:40	07:21 16:57	07:54 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:06	06:29 20:29	07:05 19:35		07:42 18:38	07:23 16:56	07:55 16:46
18	07:56 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:30 20:28	07:06 19:33		07:43 18:37	07:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:58	07:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:32 20:26	07:08 19:31		07:44 18:35	07:25 16:54	07:56 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29		07:45 18:33	07:27 16:54	07:57 16:47
21	07:54 17:18	07:17 18:00	07:27 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27		07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:02	06:35 20:21	07:11 19:25		07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:03	07:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:01 21:01	06:36 20:20	07:12 19:24		07:49 18:29	07:30 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:18	05:49 20:53	05:41 21:13	06:02 21:01	06:37 20:18	07:13 19:22		07:51 18:27	07:32 16:51	07:59 16:49
25	07:51 17:24	07:10 18:05	07:20 19:41	06:26 20:20	05:49 20:54	05:41 21:13	06:03 21:00	06:39 20:16	07:15 19:20		07:52 18:25	07:33 16:50	07:59 16:50
26	07:50 17:25	07:08 18:07	07:18 19:43	06:24 20:21	05:48 20:55	05:42 21:13	06:04 20:59	06:40 20:15	07:16 19:18		07:53 18:24	07:34 16:49	08:00 16:51
27	07:49 17:26	07:07 18:08	07:16 19:44	06:23 20:22	05:47 20:56	05:42 21:13	06:06 20:57	06:41 20:13	07:17 19:16		07:55 18:22	07:35 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:23	05:46 20:57	05:42 21:13	06:07 20:56	06:42 20:11	07:18 19:14		07:56 18:21	07:37 16:48	08:00 16:52
29	07:47 17:29		07:13 19:46	06:20 20:25	05:46 20:58	05:43 21:13	06:08 20:55	06:43 20:10	07:19 19:12		07:57 18:19	07:38 16:48	08:01 16:53
30	07:46 17:31		07:11 19:48	06:18 20:26	05:45 20:59	05:43 21:13	06:09 20:54	06:44 20:08	07:21 19:11		07:59 18:18	07:39 16:47	08:01 16:54
31	07:45 17:32		07:09 19:49	19:24 (51) 19:27 (51)	05:44 21:00	06:10 20:53	06:46 20:06				08:00 18:17		08:01 16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case			3	110					120				
Sun reduction			0.59	0.61					0.69				
Oper. time red.			0.98	0.98					0.98				
Wind dir. red.			0.61	0.61					0.61				
Total reduction			0.35	0.36					0.41				
Total, real			1	40					49				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H175 - H175

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01 16:56	16:12 (51) 16:28 (51)	07:44 17:33	07:03 18:11	07:07 19:50	19:23 (50) 20:27
2	08:01 16:56	16:13 (51) 16:29 (51)	07:43 17:35	07:02 18:12	07:05 19:51	19:22 (50) 20:28
3	08:01 16:57	16:13 (51) 16:30 (51)	07:42 17:36	07:00 18:13	07:04 19:53	19:21 (50) 20:29
4	08:01 16:58	16:13 (51) 16:30 (51)	07:41 17:38	06:58 18:15	07:02 19:54	19:20 (50) 20:31
5	08:01 16:59	16:13 (51) 16:31 (51)	07:39 17:39	06:56 18:16	07:00 19:55	19:20 (50) 20:32
6	08:01 17:00	16:14 (51) 16:32 (51)	07:38 17:40	06:55 18:17	06:58 19:56	19:19 (50) 20:33
7	08:01 17:01	16:15 (51) 16:34 (51)	07:37 17:42	06:53 18:19	06:56 19:58	19:19 (50) 20:34
8	08:01 17:02	16:14 (51) 16:34 (51)	07:36 17:43	07:51 18:20	06:55 19:59	19:20 (50) 20:35
9	08:00 17:04	16:15 (51) 16:35 (51)	07:34 17:45	07:49 19:21	06:53 20:00	19:20 (50) 20:37
10	08:00 17:05	16:16 (51) 16:37 (51)	07:33 17:46	07:48 19:22	06:51 20:01	19:21 (50) 20:38
11	08:00 17:06	16:16 (51) 16:38 (51)	07:32 17:47	07:46 19:24	06:49 20:02	19:22 (50) 20:39
12	07:59 17:07	16:18 (51) 16:38 (51)	07:30 17:49	07:44 19:25	06:47 20:04	19:25 (50) 20:40
13	07:59 17:08	16:18 (51) 16:38 (51)	07:29 17:50	07:42 19:26	06:46 20:05	20:01 20:41
14	07:59 17:09	16:19 (51) 16:38 (51)	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:42
15	07:58 17:11	16:20 (51) 16:37 (51)	07:26 17:53	07:39 19:29	06:42 20:07	05:58 20:44
16	07:58 17:12	16:22 (51) 16:38 (51)	07:24 17:54	07:37 19:30	06:41 20:09	05:57 20:45
17	07:57 17:13	16:23 (51) 16:37 (51)	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46
18	07:56 17:14	16:24 (51) 16:35 (51)	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47
19	07:56 17:16	16:27 (51) 16:35 (51)	07:20 17:58	07:31 19:34	06:35 20:12	05:54 20:48
20	07:55 17:17	16:35 (51)	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49
21	07:54 17:18		07:17 18:00	07:28 19:36	06:32 20:15	05:52 20:50
22	07:54 17:20		07:15 18:01	07:26 19:38	06:30 20:16	05:51 20:51
23	07:53 17:21		07:13 18:03	07:24 19:39	06:29 20:17	05:50 20:52
24	07:52 17:22		07:12 18:04	07:22 19:40	06:27 20:18	05:49 20:53
25	07:51 17:24		07:10 18:05	07:20 19:41	06:26 20:20	05:49 20:54
26	07:50 17:25		07:08 18:07	07:18 19:43	06:24 20:21	05:48 20:55
27	07:49 17:26		07:07 18:08	07:16 19:44	06:23 20:22	05:47 20:56
28	07:48 17:28		07:05 18:09	07:15 19:45	06:21 20:23	05:46 20:57
29	07:47 17:29			07:13 19:46	06:20 20:25	05:46 20:58
30	07:46 17:31			07:11 19:48	06:18 20:26	05:45 20:59
31	07:45 17:32			07:09 19:49	19:25 (50) 19:27 (50)	05:44 21:00
Potential sun hours	288	292	369	403	458	464
Total, worst case	329			2	150	
Sun reduction	0.57			0.59	0.61	
Oper. time red.	0.98			0.98	0.98	
Wind dir. red.	0.56			0.61	0.61	
Total reduction	0.31			0.35	0.36	
Total, real	102			1	54	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H175 - H175

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:13	06:11 20:52	06:47 20:04	19:21 (50) 19:34 (50)	07:22 19:09	07:01 17:15
2	05:44 21:13	06:12 20:51	06:48 20:02	19:20 (50) 19:36 (50)	07:23 19:07	07:03 17:14
3	05:45 21:13	06:13 20:49	06:49 20:01	19:18 (50) 19:36 (50)	07:24 19:05	07:04 17:12
4	05:46 21:13	06:14 20:48	06:50 19:59	19:17 (50) 19:34 (50)	07:25 19:03	07:05 17:11
5	05:46 21:12	06:15 20:47	06:51 19:57	19:16 (50) 19:32 (50)	07:27 19:01	07:07 17:10
6	05:47 21:12	06:17 20:46	06:52 19:55	19:15 (50) 19:31 (50)	07:28 18:58	07:08 17:08
7	05:47 21:12	06:18 20:44	06:54 19:53	19:15 (50) 19:29 (50)	07:29 18:56	07:09 17:07
8	05:48 21:11	06:19 20:43	06:55 19:52	19:14 (50) 19:27 (50)	07:30 18:54	07:11 17:06
9	05:49 21:11	06:20 20:41	06:56 19:50	19:14 (50) 19:25 (50)	07:32 18:52	07:12 17:05
10	05:50 21:11	06:21 20:40	06:57 19:48	19:15 (50) 19:23 (50)	07:33 18:51	07:13 17:04
11	05:50 21:10	06:22 20:39	06:58 19:46	19:16 (50) 19:22 (50)	07:34 18:49	07:15 17:02
12	05:51 21:10	06:23 20:37	06:59 19:44	19:17 (50) 19:20 (50)	07:35 18:47	07:16 17:01
13	05:52 21:09	06:25 20:36	07:01 19:42	07:01 18:45	07:17 17:00	07:52 16:45
14	05:53 21:08	06:26 20:34	07:02 19:40	07:38 18:44	07:19 16:59	07:53 16:46
15	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:21 16:57	07:54 16:46
17	05:56 21:06	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	05:57 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:47
19	05:57 21:05	06:32 20:26	07:08 19:31	07:44 18:35	07:25 16:54	07:56 16:47
20	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33	07:27 16:54	07:57 16:47
21	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	06:00 21:02	06:35 20:21	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	06:01 21:01	06:36 20:20	07:12 19:24	07:49 18:29	07:31 16:51	07:59 16:49
24	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:51	07:59 16:49
25	06:03 21:00	06:39 20:16	07:15 19:20	07:52 18:25	07:33 16:50	07:59 16:50
26	06:04 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:51
27	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:35 16:49	08:00 16:51
28	06:07 20:56	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:00 16:52
29	06:08 20:55	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:53
30	06:09 20:54	06:44 20:08	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:54
31	06:10 20:53	06:46 20:06	19:23 (50) 19:32 (50)	08:00 18:17	08:00 16:47	08:01 16:54
Potential sun hours	470	435	377	341	289	276
Total, worst case		9	151		125	479
Sun reduction		0.74	0.69		0.50	0.49
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.61	0.61		0.56	0.56
Total reduction		0.44	0.41		0.27	0.27
Total, real		4	62		34	127

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H198 - H198

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December						
1	08:01	16:14 (50)	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40	15:59 (50)				
	16:56	14	16:28 (50)	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47	21	16:20 (50)		
2	08:01	16:14 (50)	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41	16:20 (50)				
	16:56	15	16:29 (50)	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47	20	16:20 (50)		
3	08:01	16:14 (50)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42	16:00 (50)				
	16:57	16	16:30 (50)	17:36	18:13	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:12	16:46	20	16:20 (50)		
4	08:01	16:14 (50)	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44	16:00 (50)				
	16:58	16	16:30 (50)	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46	19	16:19 (50)		
5	08:01	16:14 (50)	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45	16:01 (50)				
	16:59	17	16:31 (50)	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46	18	16:19 (50)		
6	08:01	16:15 (50)	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:52	07:28	07:08	07:46	16:01 (50)				
	17:00	17	16:32 (50)	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:46	17	16:18 (50)		
7	08:01	16:16 (50)	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47	16:01 (50)				
	17:01	18	16:34 (50)	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45	17	16:18 (50)		
8	08:01	16:16 (50)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48	16:02 (50)				
	17:02	19	16:35 (50)	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45	16	16:18 (50)		
9	08:00	16:16 (50)	07:34	07:49	06:53	06:05	05:41	05:49	06:20	06:56	07:32	07:12	07:49	16:02 (50)				
	17:04	19	16:35 (50)	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45	16	16:18 (50)		
10	08:00	16:17 (50)	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50	16:03 (50)				
	17:05	20	16:37 (50)	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45	15	16:18 (50)		
11	08:00	16:17 (50)	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50	16:04 (50)				
	17:06	21	16:38 (50)	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45	14	16:18 (50)		
12	08:00	16:18 (50)	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51	16:04 (50)				
	17:07	21	16:39 (50)	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45	14	16:18 (50)		
13	07:59	16:18 (50)	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52	16:05 (50)				
	17:08	21	16:39 (50)	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45	13	16:18 (50)		
14	07:59	16:19 (50)	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53	16:05 (50)				
	17:09	21	16:40 (50)	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:44	16:59	16:46	12	16:17 (50)		
15	07:58	16:19 (50)	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54	16:06 (50)				
	17:11	20	16:39 (50)	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46	12	16:18 (50)		
16	07:58	16:21 (50)	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54	16:06 (50)				
	17:12	19	16:40 (50)	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46	12	16:18 (50)		
17	07:57	16:21 (50)	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55	16:07 (50)				
	17:13	18	16:39 (50)	17:56	19:31	20:10	20:46	21:11	21:06	20:30	19:35	18:38	16:56	16:46	12	16:19 (50)		
18	07:56	16:22 (50)	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56	16:07 (50)				
	17:14	17	16:39 (50)	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47	11	16:18 (50)		
19	07:56	16:24 (50)	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:25	07:56	16:08 (50)				
	17:16	15	16:39 (50)	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47	11	16:19 (50)		
20	07:55	16:25 (50)	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57	16:08 (50)				
	17:17	13	16:38 (50)	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	3	16:08 (50)	16:47	11	16:19 (50)
21	07:54	16:27 (50)	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58	16:03 (50)	16:48	11	16:19 (50)	
	17:18	9	16:36 (50)	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	9	16:12 (50)	16:48	11	16:20 (50)
22	07:54	16:30 (50)	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58	16:09 (50)				
	17:20	3	16:33 (50)	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	13	16:14 (50)	16:48	11	16:20 (50)
23	07:53	16:33 (50)	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59	16:00 (50)	16:49	11	16:20 (50)	
	17:21		18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	15	16:15 (50)	16:49	11	16:21 (50)	
24	07:52	16:34 (50)	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59	16:00 (50)	16:49	11	16:20 (50)	
	17:22		18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	17	16:17 (50)	16:49	11	16:21 (50)	
25	07:51	16:35 (50)	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	07:59	15:59 (50)	16:49	11	16:20 (50)	
	17:24		18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	18	16:17 (50)	16:50	11	16:21 (50)	
26	07:50	16:36 (50)	07:08	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	07:59	15:59 (50)	16:49	11	16:21 (50)	
	17:25		18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	19	16:18 (50)	16:51	12	16:23 (50)	
27	07:49	16:37 (50)	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	07:59	15:58 (50)	16:49	11	16:21 (50)	
	17:26		18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	20	16:18 (50)	16:51	12	16:23 (50)	
28	07:48	16:38 (50)	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	07:59	15:59 (50)	16:49	11	16:20 (50)	
	17:28		18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	21	16:20 (50)	16:52	12	16:24 (50)	
29	07:47	16:39 (50)	07:13	07:19	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	07:59	15:59 (50)	16:49	11	16:21 (50)	
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	17:26	16:48	21	16:20 (50)	16:53	12	16:24 (50)	
30	07:46	16:40 (50)	07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	07:59	07:59	15:59 (50)	16:49	11	16:21 (50)	
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	17:25	16:47	21	16:20 (50)	16:54	13	16:26 (50)	
31	07:45	16:41 (50)	07:09	07:15	06:15	05:44	05:40	06:10	06:46	07:24	08:00	07:41	08:01	16:04 (50)	16:49	11	16:21 (50)	
	17:32		19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	17:24	16:47	16:54	14	16:27 (50)			
Potential sun hours	287		292	369	403	458	464	470	435	377	341	289		276				
Total, worst case		369										177					431	
Sun reduction		0.57										0.50					0.49	
Oper. time red.		0.98										0.98					0.98	
Wind dir. red.		0.56										0.56					0.	

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H199 - H199

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:25	07:57
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H200 - H200

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:46 21:13	06:14 20:48	06:50 19:59	07:26 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:16 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:10 20:33	05:42 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:48 21:12	06:18 20:44	06:54 19:54	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:03	07:36 17:43	06:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:04	07:34 17:45	06:50 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	06:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:51 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:03	07:51 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:48 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:24 20:37	07:00 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	06:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	06:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	06:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:32	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:30 20:28	07:07 19:33	07:43 18:37	07:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	06:31 19:34	06:36 20:12	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:27	07:08 19:31	07:44 18:35	07:26 16:55	07:57 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:46 18:33	07:27 16:54	07:57 16:47
21	07:55 17:18	07:17 18:00	06:28 19:37	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	06:26 19:38	06:31 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:14 18:03	06:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:29	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	05:49 20:54	05:41 21:13	06:02 21:01	06:37 20:18	07:14 19:22	07:51 18:27	07:32 16:51	07:59 16:49
25	07:51 17:24	07:10 18:05	06:20 19:42	06:26 20:20	05:49 20:55	05:41 21:13	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:33 16:50	08:00 16:50
26	07:50 17:25	07:09 18:07	06:18 19:43	06:24 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:51
27	07:49 17:26	07:07 18:08	06:17 19:44	06:23 20:22	05:47 20:56	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:36 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	06:15 19:45	06:21 20:24	05:46 20:57	05:42 21:14	06:07 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:47	06:13 20:25	06:20 20:58	05:46 20:58	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:12	07:57 18:19	07:38 16:48	08:01 16:53
30	07:46 17:31	07:03 19:48	06:11 20:26	06:18 20:59	05:45 20:59	05:43 21:14	06:09 20:54	06:44 20:08	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:54
31	07:45 17:32	07:02 19:49	06:09 20:27	06:16 21:00	05:44 21:00	06:10 20:53	06:46 20:06	08:00 20:06	08:00 18:17	08:00 16:54	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H201 - H201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:33	07:04 18:11	07:07 19:50		06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52			
2	08:01 16:57	07:43 17:35	07:02 18:12	07:06 19:52		06:15 20:28	05:43 21:02	05:44 21:13	06:12 20:51	12	19:40 (47)	17:15 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53		06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	11	19:38 (47)	17:14 16:47
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54		06:12 20:31	05:42 21:04	05:46 21:13	06:14 20:48	9	19:36 (47)	17:12 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55		06:11 20:32	05:42 21:04	05:46 21:13	06:16 20:47	7	19:34 (47)	17:11 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56		06:10 20:33	05:42 21:05	05:47 21:12	06:17 20:46	5	19:32 (47)	17:10 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:56 19:58	3	19:31 (47) 19:36 (47)	06:08 20:34	05:41 21:06	06:18 20:44	4	19:31 (47) 19:28 (47)	17:09 17:07
8	08:01 17:03	07:36 17:43	07:51 18:20	06:55 19:59	5	19:30 (47) 19:37 (47)	06:07 20:36	05:41 21:07	06:19 20:43	1	19:29 (47)	17:07 16:45
9	08:01 17:04	07:34 17:45	07:50 19:21	06:53 20:00	7	19:29 (47) 19:38 (47)	06:06 20:37	05:41 21:07	06:20 20:42			17:06 16:45
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	9	19:28 (47) 19:39 (47)	06:04 20:38	05:40 21:08	06:21 20:40			17:05 16:45
11	08:00 17:06	07:32 17:48	07:46 19:24	06:49 20:03	11	19:28 (47) 19:40 (47)	06:03 20:39	05:51 21:08	06:22 20:39			17:04 16:45
12	08:00 17:07	07:30 17:49	07:44 19:25	06:48 20:04	12	19:28 (47) 19:42 (47)	06:02 20:40	05:51 21:09	06:24 20:37			17:03 16:45
13	07:59 17:08	07:29 17:50	07:42 19:27	06:46 20:05	14	19:42 (47) 19:43 (47)	06:01 20:42	05:50 21:10	06:25 20:36			17:02 16:46
14	07:59 17:09	07:27 17:52	07:41 19:28	06:44 20:06	15	19:29 (47) 19:44 (47)	06:00 20:43	05:53 21:10	06:26 20:34			17:01 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:08	15	19:30 (47) 19:44 (47)	05:58 20:44	05:54 21:11	06:27 20:33			17:00 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	14	19:32 (47) 19:42 (47)	05:57 20:45	05:55 21:11	06:28 20:31			16:59 16:46
17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 20:10	10	19:42 (47) 20:46	05:56 21:11	05:56 21:07	06:29 20:30			16:58 16:46
18	07:57 17:14	07:21 17:57	07:33 19:33	06:37 20:11		05:55 20:47	05:40 21:12	05:57 21:06	06:31 20:28			16:57 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:36 20:13		05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:27			16:56 16:47
20	07:55 17:17	07:18 18:00	07:30 19:35	06:34 20:14		05:53 20:49	05:40 21:12	05:59 21:04	06:33 20:25			16:55 16:47
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15		05:52 20:50	05:40 21:13	06:00 21:03	06:34 20:23			16:54 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16		05:51 20:51	05:40 21:13	06:01 21:03	06:35 20:22			16:53 16:48
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:17		05:50 20:53	05:41 21:13	06:02 21:02	06:36 20:20			16:52 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19		05:50 20:54	05:41 21:13	06:03 21:01	06:38 20:18			16:51 16:49
25	07:51 17:24	07:10 18:05	07:20 19:42	06:26 20:20		05:49 20:55	05:41 21:13	06:04 21:00	06:39 20:17			16:49 16:50
26	07:50 17:25	07:09 18:07	07:18 19:43	06:24 20:21		05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15			16:48 16:51
27	07:49 17:27	07:07 18:08	07:17 19:44	06:23 20:22		05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:13			16:51 16:51
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:24		05:46 20:57	05:42 21:14	06:07 20:57	06:42 20:11	4	19:41 (47) 19:33 (47)	16:50 16:48
29	07:47 17:29		07:13 19:47	06:20 20:25		05:46 20:58	05:43 21:14	06:08 20:56	06:43 20:10	11	19:44 (47) 19:45 (47)	16:49 16:48
30	07:46 17:31		07:11 19:48	06:18 20:26		05:45 20:59	05:43 21:14	06:09 20:54	06:45 20:08	15	19:45 (47) 19:43 (47)	16:48 16:47
31	07:45 17:32		07:09 19:49			05:45 21:00		06:10 20:53	06:46 20:06	14	19:27 (47) 19:41 (47)	16:47 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case				115				73	49			
Sun reduction				0.61				0.74	0.69			
Oper. time red.				0.98				0.98	0.98			
Wind dir. red.				0.62				0.62	0.62			
Total reduction				0.37				0.44	0.41			
Total, real				42				32	20			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H202 - H202

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01	16:15 (47)	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	3 16:18 (47)	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01		07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57		17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01		07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57		17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01		07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44
	16:58		17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01		07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	16:59		17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01		07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00		17:40	18:17	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01		07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:01		17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01		07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03		17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01		07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04		17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00		07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05		17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00		07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:51
	17:06		17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:45
12	08:00		07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07		17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59		07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08		17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:00	16:45
14	07:59		07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09		17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58		07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11		17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58		07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12		17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57		07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13		17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57		07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:14		17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56		07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16		17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55		07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17		18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:34	16:54	16:47
21	07:55		07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18		18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54		07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20		18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53		07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:50	07:31	07:59
	17:21		18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52		07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22		18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51		07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00
	17:24		18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50		07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25		18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26		18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:51
28	07:49		07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28		18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47			07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29			19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46			07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:39	08:01
	17:31			19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45			07:09		05:45		06:10	06:46		08:00		08:01
	17:32			19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case		3											198
Sun reduction		0.57											0.49
Oper. time red.		0.98											0.98
Wind dir. red.		0.55											0.55
Total reduction		0.31											0.27
Total, real		1											53

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H204 - H204

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December					
1	08:02	07:44	07:04	07:08	06:17	19:40 (46)	05:44	05:44	06:11	19:53 (46)	06:47	07:22	07:02	07:41			
	16:56	17:34	18:11	19:50	20:27	24	20:04 (46)	21:01	21:14	20:52	22	20:15 (46)	20:05	19:09	17:15	16:47	
2	08:02	07:43	07:02	07:06	06:15		19:39 (46)	05:44	05:45	06:12		19:52 (46)	06:48	07:23	07:03	07:42	
	16:57	17:35	18:12	19:52	20:29	26	20:05 (46)	21:02	21:13	20:51	24	20:16 (46)	20:03	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:04	06:14		19:39 (46)	05:43	05:45	06:13		19:51 (46)	06:49	07:24	07:04	07:43	
	16:58	17:36	18:14	19:53	20:30	27	20:06 (46)	21:03	21:13	20:50	26	20:17 (46)	20:01	19:05	17:13	16:47	
4	08:02	07:41	06:59	07:02	06:13		19:40 (46)	05:43	05:46	06:15		19:50 (46)	06:50	07:26	07:06	07:44	
	16:59	17:38	18:15	19:54	20:31	28	20:08 (46)	21:04	21:13	20:48	27	20:17 (46)	19:59	19:03	17:11	16:46	
5	08:01	07:40	06:57	07:00	06:11		19:39 (46)	05:42	05:46	06:16		19:50 (46)	06:52	07:27	07:07	07:45	
	17:00	17:39	18:16	19:55	20:32	29	20:08 (46)	21:04	21:13	20:47	27	20:17 (46)	19:57	19:02	17:10	16:46	
6	08:01	07:38	06:55	06:58	06:10		19:39 (46)	05:42	05:47	06:17		20:17 (46)	06:53	07:28	07:08	07:46	
	17:01	17:41	18:18	19:57	20:33	29	20:08 (46)	21:05	21:13	20:46	28	20:17 (46)	19:56	19:00	17:09	16:46	
7	08:01	07:37	06:53	06:57	06:08		19:40 (46)	05:41	05:48	06:18		19:49 (46)	06:54	07:29	07:10	07:47	
	17:02	17:42	18:19	19:58	20:35	28	20:08 (46)	21:06	21:12	20:45	28	20:17 (46)	19:54	18:56	17:07	16:46	
8	08:01	07:36	07:51	06:55	06:07		19:39 (46)	05:41	05:48	06:19		19:49 (46)	06:55	07:31	07:11	07:48	
	17:03	17:43	18:20	19:59	20:36	27	20:06 (46)	21:07	21:12	20:43	28	20:17 (46)	19:52	18:54	17:06	16:46	
9	08:01	07:35	07:50	06:53	06:06		19:40 (46)	05:41	05:49	06:20		19:48 (46)	06:56	07:32	07:12	07:49	
	17:04	17:45	19:21	20:00	20:37	26	20:06 (46)	21:07	21:11	20:42	28	20:16 (46)	19:50	18:53	17:05	16:45	
10	08:00	07:33	07:48	06:51	06:05		19:41 (46)	05:41	05:50	06:21		19:48 (46)	06:57	07:33	07:14	07:50	
	17:05	17:46	19:23	20:02	20:38	25	20:06 (46)	21:08	21:11	20:40	26	20:14 (46)	19:48	18:51	17:04	16:45	
11	08:00	07:32	07:46	06:50	06:03		19:42 (46)	05:40	05:51	06:23		19:48 (46)	06:59	07:34	07:15	07:51	
	17:06	17:48	19:24	20:03	20:39	23	20:05 (46)	21:09	21:10	20:39	25	20:13 (46)	19:46	18:49	17:03	16:45	
12	08:00	07:30	07:44	06:48	06:02		19:43 (46)	05:40	05:52	06:24		19:49 (46)	07:00	07:36	07:16	07:52	
	17:07	17:49	19:25	20:04	20:41	21	20:04 (46)	21:09	21:10	20:37	23	20:12 (46)	19:44	18:47	17:02	16:46	
13	07:59	07:29	07:42	06:46	06:01		19:44 (46)	05:40	05:52	06:25		19:49 (46)	07:01	07:37	07:18	07:52	
	17:08	17:50	19:27	20:05	20:42	20	20:04 (46)	21:10	21:09	20:36	22	20:11 (46)	19:43	18:46	17:01	16:46	
14	07:59	07:28	07:41	06:44	06:00		19:45 (46)	05:40	05:53	06:26		19:50 (46)	07:02	07:38	07:19	07:53	
	17:10	17:52	19:28	20:07	20:43	18	20:03 (46)	21:10	21:09	20:34	19	20:09 (46)	19:41	18:44	16:59	16:46	
15	07:58	07:26	07:39	06:43	05:59		19:46 (46)	05:40	05:54	06:27		19:50 (46)	07:03	07:39	07:20	07:54	
	17:11	17:53	19:29	20:08	20:44	15	20:01 (46)	21:11	21:08	20:33	18	20:08 (46)	19:39	18:42	16:58	16:46	
16	07:58	07:25	07:37	06:41	05:57		19:47 (46)	05:40	05:55	06:28		19:51 (46)	07:04	07:41	07:22	07:55	
	17:12	17:55	19:30	20:09	20:45	11	19:58 (46)	21:11	21:07	20:31	15	20:06 (46)	19:37	18:40	16:57	16:46	
17	07:57	07:23	07:35	06:39	05:56		19:51 (46)	05:40	05:56	06:30		19:51 (46)	07:06	07:42	07:23	07:55	
	17:13	17:56	19:32	20:10	20:46	4	19:55 (46)	21:12	21:07	20:30	14	20:05 (46)	19:35	18:39	16:57	16:47	
18	07:57	07:22	07:33	06:37	05:55			05:40	05:57	06:31		19:53 (46)	07:07	07:43	07:24	07:56	
	17:15	17:57	19:33	20:11	20:47			21:12	21:06	20:28	10	20:03 (46)	19:33	18:37	16:56	16:47	
19	07:56	07:20	07:31	06:36	05:54			05:40	05:58	06:32		19:55 (46)	07:08	07:44	07:26	07:57	
	17:16	17:59	19:34	20:13	20:48			21:12	21:05	20:27	6	20:01 (46)	19:31	18:35	16:55	16:47	
20	07:55	07:18	07:30	06:34	05:53			05:40	05:59	06:33		19:59 (46)	07:09	07:46	07:27	07:57	
	17:17	18:00	19:36	20:14	20:49			21:13	21:04	20:25	1	20:00 (46)	19:30	18:34	16:54	16:48	
21	07:55	07:17	07:28	06:32	05:52			05:40	06:00	06:34			07:10	07:47	07:28	07:58	
	17:19	18:00	19:37	20:15	20:51			21:13	21:04	20:23			19:28	18:32	16:53	16:48	
22	07:54	07:15	07:26	06:31	05:51			05:41	06:01	06:35			07:11	07:48	07:30	07:58	
	17:20	18:02	19:38	20:16	20:52			21:13	21:03	20:22			19:26	18:30	16:52	16:49	
23	07:53	07:14	07:24	06:29	05:51		19:53 (46)	05:41	06:02	06:36			07:13	07:50	07:31	07:59	
	17:21	18:03	19:39	20:18	2	19:55 (46)	20:53	21:13	21:02	20:20			19:24	18:29	16:52	16:49	
24	07:52	07:12	07:22	06:28	05:50		19:48 (46)	05:41	06:03	06:38			07:14	07:51	07:32	07:59	
	17:23	18:04	19:41	20:19	8	19:56 (46)	20:54	21:13	21:01	20:18			19:22	18:27	16:51	16:50	
25	07:51	07:10	07:20	06:26	05:49		19:47 (46)	05:41	06:04	06:39			07:15	07:52	07:33	08:00	
	17:24	18:06	19:42	20:20	11	19:58 (46)	20:55	21:14	21:00	20:17			19:20	18:26	16:50	16:50	
26	07:51	07:09	07:19	06:24	05:48		19:44 (46)	05:48	06:05	06:40			07:16	07:54	07:35	08:00	
	17:25	18:07	19:43	20:21	14	19:58 (46)	20:56	21:14	20:59	20:15			19:18	18:24	16:50	16:51	
27	07:50	07:07	07:17	06:23	05:47		19:44 (46)	05:47	06:06	06:41		19:59 (46)	07:17	07:55	07:36	08:00	
	17:27	18:08	19:44	20:22	16	20:00 (46)	20:57	21:14	20:58	20:13		20:07 (46)	19:16	18:23	16:49	16:52	
28	07:49	07:05	07:15	06:21	05:47		19:42 (46)	05:47	06:07	06:42			19:57 (46)	07:18	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	18	20:00 (46)	20:58	21:14	20:57	20:12			19:15	18:21	16:49	16:52	
29	07:48		07:13	06:20	05:46		19:42 (46)	05:46	06:08	06:43			07:20	07:58	07:38	08:01	
	17:29		19:47	20:25	20	20:02 (46)	20:59	21:14	20:56	20:10			19:13	18:20	16:48	16:53	
30	07:47		07:11	06:18	05:45		19:40 (46)	05:45	06:09	06:45			07:21	07:59	07:39	08:01	
	17:31		19:48	20:26	23	20:03 (46)	20:59	21:14	20:55	20:08			19:11	18:18	16:48	16:54	
31	07:45		07:09	06:15	05:45			06:10	06:10	06:46			08:00			08:01	
	17:32		19:49		21:00			20:53	21	20:15 (46)			18:17			16:55	
Potential sun hours	287	292	369	403	458		464	470		435		377		341	289	276	
Total, worst case				112	381			77		417							
Sun reduction				0.61	0.65			0.76		0.74							
Oper. time red.				0.98	0.98			0.98		0.98							
Wind dir. red.				0.63	0.63			0.63		0.63							
Total reduction				0.37	0.40			0.47		0.45							
Total, real				42	152			36		189							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H206 - H206

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:35 (46) 07:08	07:28 (45) 06:17	05:44 21:01	
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	07:27 (45) 08:25 (45)	06:15 20:29	05:44 21:02
3	08:02 16:58	07:42 17:37	07:00 18:14	07:04 19:53	07:26 (45) 08:24 (45)	06:14 20:30	05:43 21:03
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	07:26 (45) 08:24 (45)	06:13 20:31	05:43 21:04
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	07:25 (45) 08:23 (45)	06:11 20:32	05:42 21:05
6	08:01 17:01	07:39 17:41	06:55 18:18	06:59 19:57	07:26 (45) 08:24 (45)	06:10 20:34	05:42 21:05
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	07:25 (45) 08:23 (45)	06:08 20:35	05:42 21:06
8	08:01 17:03	07:36 17:44	07:52 18:20	06:55 19:59	07:25 (45) 08:22 (45)	06:07 20:36	05:41 21:07
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	07:25 (45) 08:21 (45)	06:06 20:37	05:41 21:07
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	07:25 (45) 08:20 (45)	06:05 20:38	05:41 21:08
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	07:26 (45) 08:20 (45)	06:03 20:39	05:40 21:09
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	07:26 (45) 08:19 (45)	06:02 20:41	05:40 21:09
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:05	07:26 (45) 08:18 (45)	06:01 20:42	05:40 21:10
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	07:27 (45) 08:17 (45)	06:00 20:43	05:40 21:10
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	07:27 (45) 08:16 (45)	05:59 20:44	05:40 21:11
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	07:28 (45) 08:14 (45)	05:58 20:45	05:40 21:11
17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 20:10	07:28 (45) 08:12 (45)	05:56 20:46	05:40 21:12
18	07:57 17:15	07:22 17:57	07:33 19:33	06:38 20:12	07:30 (45) 08:11 (45)	05:55 20:47	05:40 21:12
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	07:31 (45) 08:09 (45)	05:54 20:49	05:40 21:12
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	07:33 (45) 08:08 (45)	05:53 20:50	05:40 21:13
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:15	07:34 (45) 08:05 (45)	05:52 20:51	05:41 21:13
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:16	07:35 (45) 08:02 (45)	05:52 20:52	05:41 21:13
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	07:38 (45) 08:00 (45)	05:51 20:53	05:41 21:13
24	07:52 17:23	07:12 18:04	07:22 19:41	06:28 20:19	07:42 (45) 08:21 (45)	05:50 20:54	05:41 21:14
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	07:41 (45) 08:23 (45)	05:49 20:55	05:42 21:14
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:21	07:39 (45) 08:23 (45)	05:48 20:56	05:42 21:14
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	07:37 (45) 08:24 (45)	05:47 20:57	05:42 21:14
28	07:49 17:28	07:05 18:10	07:15 19:46	06:21 20:24	07:35 (45) 08:24 (45)	05:47 20:58	05:43 21:14
29	07:48 17:30		07:13 19:47	06:20 20:25	07:33 (45) 08:24 (45)	05:46 20:59	05:43 21:14
30	07:47 17:31		07:11 19:48	06:18 20:26	07:31 (45) 08:24 (45)	05:45 21:00	05:44 21:14
31	07:46 17:32		07:09 19:49	06:15 20:26	07:30 (45) 08:25 (45)	05:45 21:00	05:44 21:14
Potential sun hours	287	292	369	403	458	464	
Total, worst case		211	565	1128			
Sun reduction		0.59	0.59	0.61			
Oper. time red.		0.98	0.98	0.98			
Wind dir. red.		0.63	0.60	0.60			
Total reduction		0.37	0.34	0.36			
Total, real		77	194	401			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H206 - H206

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:11	06:47	07:24 (45)	07:22	07:02	07:41		
	21:14	20:52	20:05	55 08:19 (45)	19:09	17:15	16:47		
2	05:45	06:12	06:48	07:24 (45)	07:23	07:03	07:42		
	21:14	20:51	20:03	55 08:19 (45)	19:07	17:14	16:47		
3	05:45	06:14	06:49	07:23 (45)	07:25	07:04	07:43		
	21:13	20:50	20:01	56 08:19 (45)	19:05	17:13	16:47		
4	05:46	06:15	06:51	07:22 (45)	07:26	07:06	07:44		
	21:13	20:49	19:59	57 08:19 (45)	19:04	17:11	16:46		
5	05:46	06:16	06:52	07:21 (45)	07:27	07:07	07:45		
	21:13	20:47	19:57	58 08:19 (45)	19:02	17:10	16:46		
6	05:47	06:17	06:53	07:21 (45)	07:28	07:08	07:46		
	21:13	20:46	19:56	58 08:19 (45)	19:00	17:09	16:46		
7	05:48	06:18	06:54	07:21 (45)	07:29	07:10	07:47		
	21:12	20:45	19:54	58 08:19 (45)	18:56	17:08	16:46		
8	05:49	06:19	06:55	07:21 (45)	07:31	07:11	07:48		
	21:12	20:43	19:52	58 08:19 (45)	18:54	17:06	16:46		
9	05:49	06:20	06:56	07:20 (45)	07:32	07:12	07:49		
	21:12	20:42	19:50	58 08:18 (45)	18:53	17:05	16:46		
10	05:50	06:22	06:58	07:20 (45)	07:33	07:14	07:50		
	21:11	20:40	19:48	58 08:18 (45)	18:51	17:04	16:46		
11	05:51	06:23	06:59	07:20 (45)	07:34	07:15	07:51		
	21:11	20:39	19:46	57 08:17 (45)	18:49	17:03	16:46		
12	05:52	06:24	07:00	07:21 (45)	07:36	08:11 (46)	07:17	07:52	
	21:10	20:38	19:45	55 08:16 (45)	18:47	7 08:18 (46)	17:02	16:46	
13	05:52	06:25	07:01	07:22 (45)	07:37	08:07 (46)	07:18	07:53	
	21:10	20:36	19:43	54 08:16 (45)	18:46	13 08:20 (46)	17:01	16:46	
14	05:53	06:26	07:02	07:23 (45)	07:38	08:05 (46)	07:19	07:53	
	21:09	20:35	19:41	52 08:15 (45)	18:44	18 08:23 (46)	17:00	16:46	
15	05:54	06:27	07:03	07:25 (45)	07:39	08:04 (46)	07:21	07:54	
	21:08	20:33	19:39	49 08:14 (45)	18:42	20 08:24 (46)	16:59	16:46	
16	05:55	06:28	07:04	07:26 (45)	07:41	08:02 (46)	07:22	07:55	
	21:08	20:32	19:37	47 08:13 (45)	18:40	22 08:24 (46)	16:58	16:46	
17	05:56	06:30	07:06	07:27 (45)	07:42	08:03 (46)	07:23	07:56	
	21:07	20:30	19:35	45 08:12 (45)	18:39	21 08:24 (46)	16:57	16:47	
18	05:57	06:31	07:07	07:28 (45)	07:43	08:05 (46)	07:24	07:56	
	21:06	20:28	19:33	43 08:11 (45)	18:37	20 08:25 (46)	16:56	16:47	
19	05:58	06:32	07:47 (45)	07:08	07:29 (45)	07:45	08:06 (46)	07:26	07:57
	21:05	20:27	15 08:02 (45)	19:32	40 08:09 (45)	18:35	19 08:25 (46)	16:55	16:47
20	05:59	06:33	07:43 (45)	07:09	07:30 (45)	07:46	08:08 (46)	07:27	07:57
	21:05	20:25	22 08:05 (45)	19:30	37 08:07 (45)	18:34	18 08:26 (46)	16:54	16:48
21	06:00	06:34	07:41 (45)	07:10	07:31 (45)	07:47	08:09 (46)	07:28	07:58
	21:04	20:24	28 08:09 (45)	19:28	34 08:05 (45)	18:32	16 08:25 (46)	16:53	16:48
22	06:01	06:35	07:38 (45)	07:11	07:33 (45)	07:48	08:10 (46)	07:30	07:59
	21:03	20:22	32 08:10 (45)	19:26	31 08:04 (45)	18:31	14 08:24 (46)	16:52	16:49
23	06:02	06:37	07:36 (45)	07:13	07:34 (45)	07:50	08:12 (46)	07:31	07:59
	21:02	20:20	36 08:12 (45)	19:24	28 08:02 (45)	18:29	12 08:24 (46)	16:52	16:49
24	06:03	06:38	07:34 (45)	07:14	07:35 (45)	07:51	08:13 (46)	07:32	07:59
	21:01	20:19	39 08:13 (45)	19:22	24 07:59 (45)	18:27	10 08:23 (46)	16:51	16:50
25	06:04	06:39	07:32 (45)	07:15	07:36 (45)	07:52	08:14 (46)	07:33	08:00
	21:00	20:17	42 08:14 (45)	19:20	19 07:55 (45)	18:26	8 08:22 (46)	16:50	16:50
26	06:05	06:40	07:31 (45)	07:16	07:37 (45)	07:54	08:16 (46)	07:35	08:00
	20:59	20:15	44 08:15 (45)	19:18	13 07:50 (45)	18:24	5 08:21 (46)	16:50	16:51
27	06:06	06:41	07:29 (45)	07:17	07:55	08:17 (46)	07:36	08:01	08:01
	20:58	20:13	47 08:16 (45)	19:17	18:23	3 08:20 (46)	16:49	16:52	08:01
28	06:07	06:42	07:28 (45)	07:19	07:56	07:37	08:01	08:01	08:01
	20:57	20:12	49 08:17 (45)	19:15	18:21	16:49	16:52	08:01	08:01
29	06:08	06:44	07:28 (45)	07:20	07:58	07:38	08:01	08:01	08:01
	20:56	20:10	50 08:18 (45)	19:13	18:20	16:48	16:53	08:01	08:01
30	06:09	06:45	07:27 (45)	07:21	07:59	07:39	08:01	08:01	08:01
	20:55	20:08	51 08:18 (45)	19:11	18:18	16:48	16:54	08:01	08:01
31	06:10	06:46	07:25 (45)		08:00	08:01	08:01	08:01	08:01
	20:54	20:06	54 08:19 (45)		18:17	16:55	16:55	08:01	08:01
Potential sun hours	470	435	377	341	289	276			
Total, worst case		509	1199	226					
Sun reduction		0.74	0.69	0.63					
Oper. time red.		0.98	0.98	0.98					
Wind dir. red.		0.60	0.60	0.63					
Total reduction		0.43	0.40	0.39					
Total, real		219	482	88					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H207 - H207

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H208 - H208

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H209 - H209

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:54	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H210 - H210

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H211 - H211

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H212 - H212

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H213 - H213

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H214 - H214

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H215 - H215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:12 20:53	06:47 20:05	07:22 19:09	07:02 17:16	07:41 16:48
2	08:02 16:57	07:44 17:35	07:02 18:13	07:06 19:52	06:16 20:29	05:44 21:02	05:45 21:14	06:13 20:51	06:48 20:03	07:24 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:42 17:37	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:50 20:01	07:25 19:06	07:05 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:55	06:13 20:31	05:43 21:04	05:46 21:13	06:15 20:49	06:51 20:00	07:26 19:04	07:06 17:12	07:44 16:47
5	08:02 17:00	07:40 17:40	06:57 18:17	07:01 19:56	06:11 20:33	05:42 21:05	05:47 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:29 19:00	07:09 17:09	07:46 16:46
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:09 20:35	05:42 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:08	07:47 16:46
8	08:01 17:03	07:36 17:44	07:52 18:21	06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:44	06:55 19:52	07:31 18:55	07:11 17:07	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:21 20:42	06:57 19:50	07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:34 17:47	07:48 19:23	06:52 20:02	06:05 20:39	05:41 21:08	05:50 21:11	06:22 20:41	06:58 19:49	07:33 18:51	07:14 17:04	07:50 16:46
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:04 20:40	05:41 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:15 17:03	07:51 16:46
12	08:00 17:08	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	05:40 21:10	05:52 21:10	06:24 20:38	07:00 19:45	07:36 18:48	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:53 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:45 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:19 17:00	07:54 16:46
15	07:59 17:11	07:26 17:54	07:39 19:30	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:09	06:28 20:33	07:04 19:39	07:40 18:42	07:21 16:59	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 20:45	05:40 21:12	05:55 21:08	06:29 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:55 16:47
17	07:58 17:14	07:23 17:56	07:36 19:32	06:39 20:11	05:57 20:47	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:36	07:42 18:39	07:23 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	05:56 20:48	05:40 21:12	05:57 21:06	06:31 20:29	07:07 19:34	07:44 18:37	07:25 16:56	07:57 16:47
19	07:57 17:16	07:20 17:59	07:32 19:35	06:36 20:13	05:55 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:36	07:26 16:55	07:57 16:47
20	07:56 17:18	07:19 18:00	07:30 19:36	06:34 20:14	05:54 20:50	05:41 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:16	05:53 20:51	05:41 21:13	06:00 21:04	06:34 20:24	07:11 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:52 20:52	05:41 21:14	06:01 21:03	06:36 20:22	07:12 19:26	07:49 18:31	07:30 16:53	07:59 16:49
23	07:54 17:22	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:20	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49
24	07:53 17:23	07:12 18:05	07:23 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:28	07:32 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:42 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:53 18:26	07:34 16:51	08:00 16:51
26	07:51 17:26	07:09 18:07	07:19 19:43	06:25 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:19	07:54 18:24	07:35 16:50	08:01 16:51
27	07:50 17:27	07:07 18:09	07:17 19:45	06:23 20:23	05:48 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:18 19:17	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:22 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:43 20:12	07:19 19:15	07:57 18:21	07:37 16:49	08:01 16:53
29	07:48 17:30	07:05 18:13	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:01 16:53
30	07:47 17:31	07:04 18:16	07:12 19:48	06:19 20:27	05:46 21:00	05:44 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:19	07:40 16:48	08:02 16:54
31	07:46 17:33	07:03 19:50	07:10 19:50	06:18 21:01	05:45 21:01	06:10 20:54	06:10 20:07	06:46 20:07	08:01 18:17	08:02 16:55	08:02 16:55	08:02 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H217 - H217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H220 - H220

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H221 - H221

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H222 - H222

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:57	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H224 - H224

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	07:43 (42) 08:11 (42)	07:02 17:15	07:41 16:47
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:44 21:02	05:45 21:14	06:12 20:51	06:48 20:03	07:23 19:07	07:44 (42) 08:10 (42)	07:03 17:14	07:42 16:47
3	08:02 16:58	07:42 17:36	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:14 20:50	06:49 20:01	07:25 19:05	07:46 (42) 08:10 (42)	07:04 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:19 (42) 07:26 (42)	07:02 19:54	06:13 20:31	05:43 21:04	05:46 21:13	06:15 20:49	07:26 19:59	07:47 (42) 08:09 (42)	07:06 17:11	07:44 16:46
5	08:02 17:00	07:40 17:39	06:57 18:16	07:17 (42) 07:28 (42)	07:00 19:56	06:11 20:32	05:42 21:05	05:46 21:13	06:16 20:47	07:27 19:57	07:48 (42) 08:08 (42)	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	07:16 (42) 07:30 (42)	06:59 19:57	06:10 20:34	05:42 21:05	05:47 21:13	06:17 20:46	07:28 19:00	07:49 (42) 08:07 (42)	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	07:14 (42) 07:31 (42)	06:57 19:58	06:08 20:35	05:41 21:06	05:48 21:12	06:18 20:45	07:29 19:54	07:51 (42) 08:06 (42)	07:10 17:08	07:47 16:46
8	08:01 17:03	07:36 17:44	07:52 18:20	08:12 (42) 08:31 (42)	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	07:31 19:52	07:52 (42) 08:04 (42)	07:11 17:06	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	08:10 (42) 08:31 (42)	06:53 20:00	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	07:32 19:50	07:53 (42) 08:02 (42)	07:13 17:05	07:49 16:46
10	08:01 17:05	07:33 17:46	07:48 19:23	08:08 (42) 08:31 (42)	06:51 20:02	06:05 20:38	05:41 21:08	05:50 21:11	06:21 20:41	07:33 19:48	07:54 (42) 07:58 (42)	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:48	07:46 19:24	08:07 (42) 08:32 (42)	06:50 20:03	06:03 20:39	05:40 21:09	05:51 21:11	06:23 20:39	07:34 19:46	07:15 17:03	07:51 16:46	07:51 16:46
12	08:00 17:07	07:31 17:49	07:44 19:25	08:05 (42) 08:32 (42)	06:48 20:04	06:02 20:41	05:40 21:09	05:52 21:10	06:24 20:38	07:00 19:45	07:17 17:02	07:52 16:46	07:52 16:46
13	08:00 17:08	07:29 17:51	07:43 19:27	08:04 (42) 08:31 (42)	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:18 17:01	07:53 16:46	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	08:04 (42) 08:31 (42)	06:44 20:07	06:00 20:43	05:40 21:10	05:53 21:09	06:36 20:35	07:02 19:41	07:19 17:00	07:54 16:46	07:53 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	08:04 (42) 08:30 (42)	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:21 16:59	07:54 16:46	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	08:04 (42) 08:28 (42)	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:08	06:28 20:32	07:04 19:37	07:22 16:58	07:55 16:46	07:55 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	08:05 (42) 08:27 (42)	06:39 20:10	05:56 20:46	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:35	07:23 16:57	07:56 16:47	07:56 16:47
18	07:57 17:15	07:22 17:57	07:33 19:33	08:06 (42) 08:26 (42)	06:37 20:12	05:55 20:47	05:40 21:12	05:57 21:06	06:31 20:28	07:07 19:33	07:25 16:56	07:57 16:47	07:57 16:47
19	07:56 17:16	07:20 17:59	07:32 19:34	08:08 (42) 08:24 (42)	06:36 20:13	05:54 20:49	05:40 21:12	05:58 21:05	06:32 20:27	07:08 19:32	07:26 16:55	07:57 16:47	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	08:10 (42) 08:21 (42)	06:34 20:14	05:53 20:50	05:40 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:27 16:54	07:58 16:48	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:51	05:40 21:13	06:00 21:04	06:34 20:24	07:10 19:28	07:47 18:32	07:28 16:53	07:58 16:48	07:58 16:48
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:16	05:51 20:52	05:41 21:13	06:01 21:03	06:35 20:22	07:11 19:26	07:48 18:31	07:30 16:52	07:59 16:49	07:59 16:49
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	05:51 20:53	05:41 21:13	06:02 21:02	06:37 20:20	07:13 19:24	07:13 18:29	07:31 16:52	07:59 16:49	07:59 16:49
24	07:52 17:23	07:12 18:04	07:22 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:14 18:27	07:32 16:51	08:00 16:50	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:15 18:26	07:33 16:50	08:00 16:50	08:00 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:16 18:24	07:35 16:50	08:00 16:51	08:00 16:51
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:16	07:17 18:23	07:36 16:49	08:01 16:52	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:42 20:12	07:19 19:15	07:19 18:21	07:37 16:49	08:01 16:52	08:01 16:52
29	07:48 17:29	07:05 18:13	07:14 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:20 18:20	07:38 16:48	08:01 16:53	08:01 16:53
30	07:47 17:31	07:04 18:11	07:11 19:48	06:18 20:26	05:45 21:00	05:44 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:21 18:18	07:40 16:48	08:01 16:54	08:01 16:54
31	07:46 17:32	07:03 19:49	07:09 19:49	06:17 21:01	05:44 21:01	05:43 21:14	06:10 20:54	06:46 20:06	07:22 18:17	07:22 17:17	07:49 16:55	08:01 16:55	08:01 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case			337						165	178			
Sun reduction			0.59						0.69	0.63			
Oper. time red.			0.98						0.98	0.98			
Wind dir. red.			0.62						0.62	0.62			
Total reduction			0.36						0.42	0.38			
Total, real			120						69	68			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H225 - H225

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	07:44	16:37 (43)	07:04	07:07	06:17
	16:56	17:34	16:49 (43)	18:11	19:50	19:42 (38)
2	08:02	07:43	16:41 (43)	07:02	07:06	22 20:04 (38)
	16:57	17:35	16:46 (43)	18:12	19:52	19:41 (38)
3	08:02	07:42		07:00	07:04	23 20:04 (38)
	16:58	17:36		18:14	19:53	19:42 (38)
4	08:02	16:29 (43)	07:41	06:59	07:02	22 20:04 (38)
	16:58	16:31 (43)	17:38	18:15	19:54	19:43 (38)
5	08:02	16:29 (43)	07:40	06:57	07:00	20 20:03 (38)
	16:59	16:32 (43)	17:39	18:16	19:55	19:44 (38)
6	08:01	16:27 (43)	07:38	06:55	06:58	17 20:01 (38)
	17:00	16:32 (43)	17:41	18:18	19:57	19:45 (38)
7	08:01	16:27 (43)	07:37	06:53	06:57	15 20:00 (38)
	17:02	16:33 (43)	17:42	18:19	19:58	20:33
8	08:01	16:27 (43)	07:36	07:51	06:55	12 19:59 (38)
	17:03	16:35 (43)	17:43	18:20	19:59	20:35
9	08:01	16:27 (43)	07:35	07:50	06:53	5 19:55 (38)
	17:04	16:36 (43)	17:45	19:21	20:00	19:50 (38)
10	08:01	16:27 (43)	07:33	07:48	06:51	06:06
	17:05	16:37 (43)	17:46	19:23	20:02	20:37
11	08:00	16:27 (43)	07:32	07:46	06:49	06:04
	17:06	16:38 (43)	17:48	19:24	20:03	20:38
12	08:00	16:26 (43)	07:30	07:44	06:48	06:03
	17:07	16:39 (43)	17:49	19:25	20:04	20:39
13	07:59	16:27 (43)	07:29	07:42	06:46	06:02
	17:08	16:41 (43)	17:50	19:27	20:05	20:41
14	07:59	16:26 (43)	07:28	07:41	06:44	06:01
	17:10	16:42 (43)	17:52	19:28	20:07	20:42
15	07:59	16:27 (43)	07:26	07:39	06:42	20:43
	17:11	16:44 (43)	17:53	19:29	20:08	05:58
16	07:58	16:26 (43)	07:25	07:37	06:41	20:44
	17:12	16:44 (43)	17:55	19:30	20:09	05:57
17	07:57	16:26 (43)	07:23	07:35	06:39	20:45
	17:13	16:45 (43)	17:56	19:32	20:10	05:56
18	07:57	16:27 (43)	07:22	07:33	06:37	20:46
	17:15	16:48 (43)	17:57	19:33	20:11	05:55
19	07:56	16:27 (43)	07:20	07:31	06:36	20:47
	17:16	16:49 (43)	17:59	19:34	20:13	05:54
20	07:55	16:27 (43)	07:18	07:30	06:34	20:48
	17:17	16:50 (43)	18:00	19:35	20:14	19:48 (38)
21	07:55	16:27 (43)	07:17	07:28	06:32	3 19:51 (38)
	17:18	16:51 (43)	18:00	19:37	20:15	20:50
22	07:54	16:28 (43)	07:15	07:26	06:31	6 19:53 (38)
	17:20	16:53 (43)	18:01	19:38	20:16	20:51
23	07:53	16:29 (43)	07:14	07:24	06:29	8 19:53 (38)
	17:21	16:55 (43)	18:03	19:39	20:18	19:44 (38)
24	07:52	16:29 (43)	07:12	07:22	06:27	11 19:55 (38)
	17:22	16:55 (43)	18:04	19:41	20:19	20:53
25	07:51	16:29 (43)	07:10	07:20	06:26	13 19:43 (38)
	17:24	16:55 (43)	18:06	19:42	20:20	20:54
26	07:51	16:30 (43)	07:09	07:19	06:24	15 19:58 (38)
	17:25	16:55 (43)	18:07	19:43	20:21	20:55
27	07:50	16:31 (43)	07:07	07:17	06:23	16 19:58 (38)
	17:27	16:54 (43)	18:08	19:44	20:23	20:56
28	07:49	16:32 (43)	07:05	07:15	06:21	18 19:59 (38)
	17:28	16:54 (43)	18:10	19:45	20:24	20:57
29	07:48	16:33 (43)		07:13	06:20	20 20:01 (38)
	17:29	16:54 (43)		19:47	20:25	20:58
30	07:47	16:34 (43)		07:11	06:18	19 19:41 (38)
	17:31	16:53 (43)		19:48	20:26	20:59
31	07:46	16:35 (43)		07:09		21 20:02 (38)
	17:32	16:51 (43)		19:49		19:41 (38)
Potential sun hours	287	292	369	403	458	21:00
Total, worst case	470	17	153	136		464
Sun reduction	0.57	0.59	0.61	0.65		
Oper. time red.	0.98	0.98	0.98	0.98		
Wind dir. red.	0.56	0.56	0.63	0.63		
Total reduction	0.31	0.32	0.37	0.39		
Total, real	146	5	57	54		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H225 - H225

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	07:02 17:15	07:41 16:47
2	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	12 16:21 (43)
3	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:13	10 16:20 (43)
4	05:46 21:13	06:14 20:49	06:50 19:59	07:26 19:03	07:06 17:11	9 16:19 (43)
5	05:46 21:13	06:16 20:47	19:59 (38) 20:07 (38)	06:52 19:57	07:27 19:02	8 16:19 (43)
6	05:47 21:13	06:17 20:46	19:56 (38) 20:09 (38)	06:53 19:56	07:28 19:00	6 16:18 (43)
7	05:48 21:12	06:18 20:45	19:54 (38) 20:10 (38)	06:54 19:54	07:29 18:56	5 16:18 (43)
8	05:48 21:12	06:19 20:43	19:53 (38) 20:11 (38)	06:55 19:52	07:31 18:54	4 16:18 (43)
9	05:49 21:11	06:20 20:42	19:52 (38) 20:12 (38)	06:56 19:50	07:32 18:53	2 16:18 (43)
10	05:50 21:11	06:21 20:40	19:51 (38) 20:13 (38)	06:57 19:48	07:33 18:51	7 16:18 (43)
11	05:51 21:11	06:22 20:39	19:50 (38) 20:13 (38)	06:59 19:46	07:34 18:49	12 16:20 (43)
12	05:51 21:10	06:24 20:37	19:49 (38) 20:12 (38)	07:00 19:44	07:36 18:47	16 16:23 (43)
13	05:52 21:09	06:25 20:36	19:49 (38) 20:11 (38)	07:01 19:43	07:37 18:45	19 16:24 (43)
14	05:53 21:09	06:26 20:34	19:49 (38) 20:10 (38)	07:02 19:41	07:38 18:44	21 16:26 (43)
15	05:54 21:08	06:27 20:33	19:49 (38) 20:08 (38)	07:03 19:39	07:39 18:42	22 16:26 (43)
16	05:55 21:08	06:28 20:31	19:48 (38) 20:06 (38)	07:04 19:37	07:41 18:40	23 16:26 (43)
17	05:56 21:07	06:29 20:30	19:48 (38) 20:05 (38)	07:06 19:35	07:42 18:39	25 16:28 (43)
18	05:57 21:06	06:31 20:28	19:48 (38) 20:03 (38)	07:07 19:33	07:43 18:37	26 16:28 (43)
19	05:58 21:05	06:32 20:27	19:49 (38) 20:01 (38)	07:08 19:31	07:44 18:35	26 16:29 (43)
20	05:59 21:05	06:33 20:25	19:49 (38) 20:00 (38)	07:09 19:29	07:46 18:34	26 16:29 (43)
21	06:00 21:04	06:34 20:23	19:50 (38) 19:58 (38)	07:10 19:28	07:47 18:32	25 16:28 (43)
22	06:01 21:03	06:35 20:22	19:52 (38) 19:57 (38)	07:11 19:26	07:48 18:30	24 16:27 (43)
23	06:02 21:02	06:36 20:20	19:53 (38) 19:56 (38)	07:13 19:24	07:50 18:29	23 16:26 (43)
24	06:03 21:01	06:38 20:18	07:14 19:22	07:51 18:27	07:52 18:26	22 16:26 (43)
25	06:04 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:53 18:25	21 16:25 (43)
26	06:05 20:59	06:40 20:15	07:16 19:18	07:54 18:24	07:55 18:24	20 16:24 (43)
27	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:56 18:23	18 16:24 (43)
28	06:07 20:57	06:42 20:12	07:18 19:15	07:56 18:21	07:57 18:21	17 16:23 (43)
29	06:08 20:56	06:43 20:10	07:20 19:13	07:58 18:20	07:58 18:20	16 16:22 (43)
30	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	07:59 18:18	14 16:21 (43)
31	06:10 20:53	06:46 20:06	08:00 18:17	08:00 18:17	08:00 18:17	13 16:21 (43)
Potential sun hours	470	435	377	341	289	276
Total, worst case		294			436	57
Sun reduction		0.74			0.50	0.49
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.63			0.56	0.56
Total reduction		0.45			0.27	0.27
Total, real		132			119	15

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H226 - H226

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for days (1-31) and summary statistics.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise/set, Minutes with flicker, First/Last time with flicker, and WTG causing flicker first/last time.

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H227 - H227

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	
	16:56	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47	
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43	
	16:57	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:46	
4	08:02	07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44	
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46	
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46	
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46	
	17:00	17:41	18:17	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46	
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47	
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46	
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45	
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49	
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45	
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50	
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45	
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:51	
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:45	
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:16	07:52	
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45	
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52	
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:00	16:45	
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53	15:47 (44)
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46	2 15:49 (44)
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54	15:45 (44)
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46	5 15:50 (44)
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55	15:45 (44)
	17:12	17:55	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46	7 15:52 (44)
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55	15:45 (44)
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46	8 15:53 (44)
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56	15:45 (44)
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47	10 15:55 (44)
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57	15:45 (44)
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47	10 15:55 (44)
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57	15:46 (44)
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:34	16:54	16:47	10 15:56 (44)
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58	15:45 (44)
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48	11 15:56 (44)
22	07:54	07:15	07:26	06:31	05:51	05:40	06:01	06:35	07:11	07:48	07:30	07:58	15:46 (44)
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48	11 15:57 (44)
23	07:53	07:14	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:50	07:31	07:59	15:47 (44)
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49	10 15:57 (44)
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59	15:47 (44)
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:49	10 15:57 (44)
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00	15:48 (44)
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	10 15:58 (44)
26	07:51	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00	15:49 (44)
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51	8 15:57 (44)
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00	15:49 (44)
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:51	8 15:57 (44)
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01	15:51 (44)
	17:28	18:10	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52	7 15:58 (44)
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01	15:53 (44)
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53	4 15:57 (44)
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:39	08:01	
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:47	16:54	
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01	
	17:32		19:49		21:00		20:53	20:06		18:17		16:55	
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case													131
Sun reduction													0.49
Oper. time red.													0.98
Wind dir. red.													0.56
Total reduction													0.27
Total, real													35

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H228 - H228

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H230 - H230

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:38	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H233 - H233

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:31	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:07	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:30	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H248 - H248

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:13	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:21	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H249 - H249

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H250 - H250

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H251 - H251

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:02	07:44	07:04	07:07	06:17	19:22 (40)	05:44	05:44	06:11	06:47	07:22	07:02	07:41			
	16:56	17:33	18:11	19:50	20:27	34	19:56 (40)	21:01	21:14	20:52	19:09	17:15	16:47			
2	08:02	07:43	07:02	07:06	06:15	19:22 (40)	05:43	05:44	06:12	19:43 (40)	06:48	07:23	07:42			
	16:57	17:35	18:12	19:52	20:29	33	19:55 (40)	21:02	21:14	20:51	19:07	17:14	16:47			
3	08:02	07:42	07:00	07:04	06:14	19:23 (40)	05:43	05:45	06:13	19:41 (40)	06:49	07:24	07:43			
	16:57	17:36	18:14	19:53	20:30	32	19:55 (40)	21:03	21:13	20:50	19:05	17:13	16:46			
4	08:02	07:41	06:58	07:02	06:12	19:24 (40)	05:42	05:46	06:14	19:39 (40)	06:50	07:26	07:44			
	16:58	17:38	18:15	19:54	20:31	30	19:54 (40)	21:04	21:13	20:48	19:03	17:11	16:46			
5	08:02	07:40	06:57	07:00	06:11	19:24 (40)	05:42	05:46	06:16	19:37 (40)	06:52	07:27	07:45			
	16:59	17:39	18:16	19:55	20:32	29	19:53 (40)	21:05	21:13	20:47	19:02	17:10	16:46			
6	08:01	07:38	06:55	06:58	06:10	19:25 (40)	05:42	05:47	06:17	19:36 (40)	06:53	07:28	07:46			
	17:00	17:40	18:17	19:57	20:33	27	19:52 (40)	21:05	21:13	20:46	19:56	19:00	17:09	16:46		
7	08:01	07:37	06:53	06:57	06:08	19:27 (40)	05:41	05:48	06:18	19:35 (40)	06:54	07:29	07:10	16:47		
	17:01	17:42	18:19	19:58	20:35	24	19:51 (40)	21:06	21:12	20:45	19:54	18:56	17:07	16:45		
8	08:01	07:36	07:51	06:55	06:07	19:27 (40)	05:41	05:48	06:19	19:33 (40)	06:55	07:31	07:11	16:48		
	17:03	17:43	18:20	19:59	20:36	22	19:49 (40)	21:07	21:12	20:43	19:52	18:54	17:06	16:45		
9	08:01	07:35	07:50	06:53	06:06	19:29 (40)	05:41	05:49	06:20	19:32 (40)	06:56	07:32	07:12	16:49		
	17:04	17:45	19:21	20:00	20:37	19	19:48 (40)	21:07	21:11	20:42	19:50	18:52	17:05	16:45		
10	08:01	07:33	07:48	06:51	06:04	19:31 (40)	05:40	05:50	06:21	19:31 (40)	06:57	07:33	07:14	16:50		
	17:05	17:46	19:23	20:02	20:38	15	19:46 (40)	21:08	21:11	20:40	19:48	18:51	17:04	16:45		
11	08:00	07:32	07:46	06:49	06:03	19:34 (40)	05:40	05:51	06:22	19:31 (40)	06:58	07:34	07:15	16:51		
	17:06	17:48	19:24	20:03	20:39	9	19:43 (40)	21:09	21:11	20:39	19:46	18:49	17:03	16:45		
12	08:00	07:30	07:44	06:48	06:02	19:35 (40)	05:40	05:51	06:24	19:30 (40)	07:00	07:36	07:16	16:52		
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	34	20:04 (40)	19:44	18:47	17:01	16:45		
13	07:59	07:29	07:42	06:46	06:01	19:36 (40)	05:40	05:52	06:25	19:30 (40)	07:01	07:37	07:18	16:52		
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	35	20:05 (40)	19:43	18:45	17:00	16:45		
14	07:59	07:28	07:41	06:44	19:37 (40)	06:00	05:40	05:53	06:26	19:30 (40)	07:02	07:38	07:19	16:53		
	17:09	17:52	19:28	20:06	7	19:44 (40)	20:43	21:10	21:09	20:34	35	20:05 (40)	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	19:34 (40)	05:58	05:40	05:54	06:27	19:29 (40)	07:03	07:39	07:20	16:54	16:46	
	17:11	17:53	19:29	20:08	12	19:46 (40)	20:44	21:11	21:08	20:33	36	20:05 (40)	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	19:31 (40)	05:57	05:40	05:55	06:28	19:29 (40)	07:04	07:41	07:22	16:55	16:46	
	17:12	17:55	19:30	20:09	16	19:47 (40)	20:45	21:11	21:08	20:31	36	20:05 (40)	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	19:29 (40)	05:56	05:40	05:56	06:29	19:29 (40)	07:05	07:42	07:23	16:55	16:46	
	17:13	17:56	19:32	20:10	19	19:48 (40)	20:46	21:12	21:07	20:30	36	20:05 (40)	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	19:28 (40)	05:55	05:40	05:57	06:31	19:28 (40)	07:07	07:43	07:24	16:56	16:47	
	17:14	17:57	19:33	20:11	21	19:49 (40)	20:47	21:12	21:06	20:28	35	20:03 (40)	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	19:26 (40)	05:54	05:40	05:58	06:32	19:28 (40)	07:08	07:44	07:26	16:57	16:47	
	17:16	17:59	19:34	20:13	24	19:50 (40)	20:48	21:12	21:05	20:27	33	20:01 (40)	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	19:25 (40)	05:53	05:40	05:59	06:33	19:28 (40)	07:09	07:46	07:27	16:57	16:47	
	17:17	18:00	19:35	20:14	26	19:51 (40)	20:50	21:13	21:04	20:25	32	20:00 (40)	19:29	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	19:25 (40)	05:52	05:40	05:59	06:34	19:28 (40)	07:10	07:47	07:28	16:58	16:48	
	17:18	18:00	19:37	20:15	28	19:53 (40)	20:51	21:13	21:04	20:23	30	19:58 (40)	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	19:23 (40)	05:51	05:40	06:00	06:35	19:29 (40)	07:11	07:48	07:30	16:58	16:48	
	17:20	18:01	19:38	20:16	30	19:53 (40)	20:52	21:13	21:03	20:22	28	19:57 (40)	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	19:23 (40)	05:50	05:41	06:01	06:36	19:30 (40)	07:12	07:50	07:31	16:59	16:49	
	17:21	18:03	19:39	20:18	32	19:55 (40)	20:53	21:13	21:02	20:20	26	19:56 (40)	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	19:22 (40)	05:50	05:41	06:03	06:38	19:30 (40)	07:14	07:51	07:32	16:59	16:49	
	17:22	18:04	19:40	20:19	34	19:56 (40)	20:54	21:14	21:01	20:18	24	19:54 (40)	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	19:22 (40)	05:49	05:41	06:04	06:39	19:31 (40)	07:15	07:52	07:33	16:50	16:49	
	17:24	18:05	19:42	20:20	35	19:57 (40)	20:55	21:14	21:00	20:17	21	19:52 (40)	19:20	18:26	16:50	16:50
26	07:51	07:09	07:18	06:24	19:22 (40)	05:48	05:42	06:05	06:40	19:32 (40)	07:16	07:54	07:35	16:50	16:50	
	17:25	18:07	19:43	20:21	36	19:58 (40)	20:56	21:14	21:00	20:15	18	19:50 (40)	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	19:21 (40)	05:47	05:42	06:06	06:41	19:33 (40)	07:17	07:55	07:36	16:50	16:51	
	17:26	18:08	19:44	20:22	36	19:57 (40)	20:57	21:14	20:58	20:13	15	19:48 (40)	19:16	18:23	16:49	16:51
28	07:49	07:05	07:15	06:21	19:22 (40)	05:46	05:42	06:07	06:42	19:35 (40)	07:18	07:56	07:37	16:51	16:52	
	17:28	18:10	19:45	20:24	35	19:57 (40)	20:58	21:14	20:57	20:12	12	19:47 (40)	19:14	18:21	16:48	16:52
29	07:48	07:13	07:23	06:20	19:21 (40)	05:46	05:43	06:08	06:43	19:39 (40)	07:20	07:58	07:38	16:51	16:53	
	17:29	18:11	19:47	20:25	35	19:56 (40)	20:59	21:14	20:56	20:10	6	19:45 (40)	19:13	18:20	16:48	16:53
30	07:47	07:11	07:21	06:18	19:22 (40)	05:45	05:43	06:09	06:45	19:40 (40)	07:21	07:59	07:39	16:51	16:54	
	17:31	18:13	19:48	20:26	34	19:56 (40)	20:59	21:14	20:55	20:08	19:11	18:18	16:47	16:54	16:54	
31	07:45	07:09	07:19	06:15	19:21 (40)	05:44	05:40	06:10	06:46	19:39 (40)	07:22	08:00	07:40	16:51	16:54	
	17:32	18:14	19:49	20:27	21:00	21:00	20:53	20:06	20:06	18:17	16:47	16:54	16:54	16:54	16:54	
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276				
Total, worst case				460	274			742								
Sun reduction				0.61	0.65			0.74								
Oper. time red.				0.98	0.98			0.98								
Wind dir. red.				0.62	0.62			0.62								
Total reduction				0.37	0.40			0.45								
Total, real				171	108			334								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H252 - H252

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02	16:09 (43)	07:44	07:04	07:07	19:23 (38)	06:17	05:44
	16:56	18 16:27 (43)	17:33	18:11	19:50	6 19:29 (38)	20:27	21:01
2	08:02	16:10 (43)	07:43	07:02	07:06	19:22 (38)	06:15	05:43
	16:57	18 16:28 (43)	17:35	18:12	19:52	8 19:30 (38)	20:29	21:02
3	08:02	16:10 (43)	07:42	07:00	07:04	19:21 (38)	06:14	05:43
	16:57	19 16:29 (43)	17:36	18:14	19:53	10 19:31 (38)	20:30	21:03
4	08:02	16:11 (43)	07:41	06:58	07:02	19:20 (38)	06:12	05:42
	16:58	20 16:31 (43)	17:38	18:15	19:54	12 19:32 (38)	20:31	21:04
5	08:02	16:12 (43)	07:40	06:57	07:00	19:19 (38)	06:11	05:42
	16:59	20 16:32 (43)	17:39	18:16	19:55	14 19:33 (38)	20:32	21:05
6	08:01	16:12 (43)	07:38	06:55	06:58	19:18 (38)	06:10	05:42
	17:00	20 16:32 (43)	17:41	18:18	19:57	16 19:34 (38)	20:33	21:05
7	08:01	16:12 (43)	07:37	06:53	06:57	19:19 (38)	06:08	05:41
	17:02	21 16:33 (43)	17:42	18:19	19:58	17 19:36 (38)	20:35	21:06
8	08:01	16:13 (43)	07:36	07:51	06:55	19:19 (38)	06:07	05:41
	17:03	22 16:35 (43)	17:43	18:20	19:59	18 19:37 (38)	20:36	21:07
9	08:01	16:14 (43)	07:35	07:50	06:53	19:19 (38)	06:06	05:41
	17:04	21 16:35 (43)	17:45	19:21	20:00	19 19:38 (38)	20:37	21:07
10	08:01	16:14 (43)	07:33	07:48	06:51	19:19 (38)	06:04	05:40
	17:05	20 16:34 (43)	17:46	19:23	20:02	19 19:38 (38)	20:38	21:08
11	08:00	16:16 (43)	07:32	07:46	06:49	19:21 (38)	06:03	05:40
	17:06	19 16:35 (43)	17:48	19:24	20:03	17 19:38 (38)	20:39	21:09
12	08:00	16:16 (43)	07:30	07:44	06:48	19:22 (38)	06:02	05:40
	17:07	18 16:34 (43)	17:49	19:25	20:04	13 19:35 (38)	20:41	21:09
13	07:59	16:18 (43)	07:29	07:42	06:46	19:24 (38)	06:01	05:40
	17:08	16 16:34 (43)	17:50	19:27	20:05	8 19:32 (38)	20:42	21:10
14	07:59	16:18 (43)	07:28	07:41	06:44		06:00	05:40
	17:10	16 16:34 (43)	17:52	19:28	20:07		20:43	21:10
15	07:59	16:20 (43)	07:26	07:39	06:42		05:58	05:40
	17:11	14 16:34 (43)	17:53	19:29	20:08		20:44	21:11
16	07:58	16:21 (43)	07:25	07:37	06:41		05:57	05:40
	17:12	11 16:32 (43)	17:55	19:30	20:09		20:45	21:11
17	07:57	16:23 (43)	07:23	07:35	06:39		05:56	05:40
	17:13	7 16:30 (43)	17:56	19:32	20:10		20:46	21:12
18	07:57		07:22	07:33	06:37		05:55	05:40
	17:15		17:57	19:33	20:11		20:47	21:12
19	07:56		07:20	07:31	06:36		05:54	05:40
	17:16		17:59	19:34	20:13		20:48	21:12
20	07:55		07:18	07:30	06:34		05:53	05:40
	17:17		18:00	19:35	20:14		20:50	21:13
21	07:55		07:17	07:28	06:32		05:52	05:40
	17:18		18:00	19:37	20:15		20:51	21:13
22	07:54		07:15	07:26	06:31		05:51	05:40
	17:20		18:01	19:38	20:16		20:52	21:13
23	07:53		07:14	07:24	06:29		05:50	05:41
	17:21		18:03	19:39	20:18		20:53	21:13
24	07:52		07:12	07:22	06:27		05:50	05:41
	17:22		18:04	19:40	20:19		20:54	21:14
25	07:51		07:10	07:20	06:26		05:49	05:41
	17:24		18:06	19:42	20:20		20:55	21:14
26	07:51		07:09	07:19	06:24		05:48	05:42
	17:25		18:07	19:43	20:21		20:56	21:14
27	07:50		07:07	07:17	06:23		05:47	05:42
	17:27		18:08	19:44	20:23		20:57	21:14
28	07:49		07:05	07:15	06:21		05:46	05:42
	17:28		18:10	19:45	20:24		20:58	21:14
29	07:48			07:13	06:20		05:46	05:43
	17:29			19:47	20:25		20:59	21:14
30	07:47			07:11	06:18		05:45	05:43
	17:31			19:48	20:26		21:00	21:14
31	07:46			07:09			05:45	
	17:32			19:49	3 19:24 (38)		21:00	
					3 19:27 (38)			
Potential sun hours	287	292	369	403	458	464		
Total, worst case	300			3	177			
Sun reduction	0.57			0.59	0.61			
Oper. time red.	0.98			0.98	0.98			
Wind dir. red.	0.56			0.61	0.61			
Total reduction	0.31			0.35	0.36			
Total, real	93			1	64			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H252 - H252

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	19:20 (38) 19:37 (38)	07:22 19:09	07:41 17:15
2	05:44 21:14	06:12 20:51	06:48 20:03	19:18 (38) 19:37 (38)	07:23 19:07	07:42 17:14
3	05:45 21:13	06:13 20:50	06:49 20:01	19:17 (38) 19:36 (38)	07:24 19:05	07:43 17:13
4	05:46 21:13	06:14 20:49	06:50 19:59	19:16 (38) 19:34 (38)	07:26 19:03	07:44 17:11
5	05:46 21:13	06:16 20:47	06:52 19:57	19:15 (38) 19:33 (38)	07:27 19:02	07:45 17:10
6	05:47 21:13	06:17 20:46	06:53 19:56	19:14 (38) 19:31 (38)	07:28 19:00	07:46 17:09
7	05:48 21:12	06:18 20:45	06:54 19:54	19:14 (38) 19:29 (38)	07:29 18:56	07:47 17:07
8	05:48 21:12	06:19 20:43	06:55 19:52	19:14 (38) 19:27 (38)	07:31 18:54	07:48 17:06
9	05:49 21:11	06:20 20:42	06:56 19:50	19:15 (38) 19:26 (38)	07:32 18:53	07:49 17:05
10	05:50 21:11	06:21 20:40	06:57 19:48	19:15 (38) 19:24 (38)	07:33 18:51	07:50 17:04
11	05:51 21:11	06:22 20:39	06:59 19:46	19:15 (38) 19:22 (38)	07:34 18:49	07:51 17:03
12	05:51 21:10	06:24 20:37	07:00 19:44	19:16 (38) 19:20 (38)	07:36 18:47	07:52 17:01
13	05:52 21:09	06:25 20:36	07:01 19:43	19:20 (38) 18:45	07:37 17:00	07:52 16:46
14	05:53 21:09	06:26 20:34	07:02 19:41	18:44 07:38	07:19 16:59	07:53 16:46
15	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	05:55 21:08	06:28 20:31	07:04 19:37	07:41 18:40	07:22 16:57	07:55 16:46
17	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:39	07:23 16:56	07:56 16:46
18	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:24 16:56	07:56 16:47
19	05:58 21:05	06:32 20:27	07:08 19:31	07:44 18:35	07:26 16:55	07:57 16:47
20	05:59 21:05	06:33 20:25	07:09 19:29	07:46 18:34	07:27 16:54	07:57 16:47
21	06:00 21:04	06:34 20:23	07:10 19:28	07:47 18:32	07:28 16:53	07:58 16:48
22	06:01 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:30 16:52	07:58 16:48
23	06:02 21:02	06:36 20:20	07:13 19:24	07:50 18:29	07:31 16:51	07:59 16:49
24	06:03 21:01	06:38 20:18	07:14 19:22	07:51 18:27	07:32 16:51	07:59 16:50
25	06:04 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:33 16:50	08:00 16:50
26	06:05 20:59	06:40 20:15	07:16 19:18	07:54 18:24	07:35 16:50	08:00 16:51
27	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49	08:01 16:51
28	06:07 20:57	06:42 20:12	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	06:08 20:56	06:43 20:10	07:20 19:13	07:58 18:20	07:38 16:48	08:01 16:53
30	06:09 20:55	06:45 20:08	19:24 (38) 19:32 (38)	07:21 19:11	07:39 18:18	08:01 16:48
31	06:10 20:53	06:46 20:06	19:22 (38) 19:35 (38)	08:00 18:17	08:00 16:55	08:01 16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case		21	167		82	551
Sun reduction		0.74	0.69		0.50	0.49
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.61	0.61		0.56	0.56
Total reduction		0.44	0.41		0.27	0.27
Total, real		9	68		22	146

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H253 - H253

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02	08:26 (40)	07:44	07:04	07:08	07:30 (39)	06:17	05:44
	16:56	20 08:46 (40)	17:34	18:11	19:50	32 08:02 (39)	20:27	21:01
2	08:02	08:26 (40)	07:43	07:02	07:06	07:30 (39)	06:15	05:43
	16:57	20 08:46 (40)	17:35	18:12	19:52	30 08:00 (39)	20:29	21:02
3	08:02	08:26 (40)	07:42	07:00	07:04	07:31 (39)	06:14	05:43
	16:58	21 08:47 (40)	17:36	18:14	19:53	28 07:59 (39)	20:30	21:03
4	08:02	08:26 (40)	07:41	06:59	07:02	07:31 (39)	06:12	05:42
	16:58	21 08:47 (40)	17:38	18:15	19:54	26 07:57 (39)	20:31	21:04
5	08:02	08:26 (40)	07:40	06:57	07:00	07:32 (39)	06:11	05:42
	16:59	21 08:47 (40)	17:39	18:16	19:55	23 07:55 (39)	20:32	21:05
6	08:02	08:27 (40)	07:39	06:55	06:58	07:34 (39)	06:10	05:42
	17:00	21 08:48 (40)	17:41	18:18	19:57	19 07:53 (39)	20:34	21:05
7	08:01	08:27 (40)	07:37	06:53	06:57	07:37 (39)	06:08	05:41
	17:02	20 08:47 (40)	17:42	18:19	19:58	13 07:50 (39)	20:35	21:06
8	08:01	08:28 (40)	07:36	07:52	06:55		06:07	05:41
	17:03	19 08:47 (40)	17:43	18:20	19:59		20:36	21:07
9	08:01	08:29 (40)	07:35	07:50	06:53		06:06	05:41
	17:04	19 08:48 (40)	17:45	19:21	20:00		20:37	21:07
10	08:01	08:29 (40)	07:33	07:48	06:51		06:04	05:40
	17:05	18 08:47 (40)	17:46	19:23	20:02		20:38	21:08
11	08:00	08:31 (40)	07:32	07:46	06:49		06:03	05:40
	17:06	16 08:47 (40)	17:48	19:24	20:03		20:39	21:09
12	08:00	08:32 (40)	07:31	07:44	06:48		06:02	05:40
	17:07	14 08:46 (40)	17:49	19:25	20:04		20:41	21:09
13	08:00	08:34 (40)	07:29	07:43	06:46		06:01	05:40
	17:08	12 08:46 (40)	17:50	19:27	20:05		20:42	21:10
14	07:59	08:35 (40)	07:28	07:41	06:44		06:00	05:40
	17:10	9 08:44 (40)	17:52	19:28	20:07		20:43	21:10
15	07:59	08:39 (40)	07:26	07:39	06:42		05:58	05:40
	17:11	3 08:42 (40)	17:53	19:29	20:08		20:44	21:11
16	07:58		07:25	07:37	06:41		05:57	05:40
	17:12		17:55	19:30	20:09		20:45	21:11
17	07:57		07:23	07:35	06:39		05:56	05:40
	17:13		17:56	19:32	20:10		20:46	21:12
18	07:57		07:22	07:33	07:54 (39)	06:37	05:55	05:40
	17:15		17:57	19:33	4 07:58 (39)	20:12	20:47	21:12
19	07:56		07:20	07:32	07:52 (39)	06:36	05:54	05:40
	17:16		17:59	19:34	8 08:00 (39)	20:13	20:49	21:12
20	07:56		07:19	07:30	07:50 (39)	06:34	05:53	05:40
	17:17		18:00	19:36	11 08:01 (39)	20:14	20:50	21:13
21	07:55		07:17	07:28	07:48 (39)	06:32	05:52	05:40
	17:18		18:00	19:37	14 08:02 (39)	20:15	20:51	21:13
22	07:54		07:15	07:26	07:46 (39)	06:31	05:51	05:40
	17:20		18:01	19:38	17 08:03 (39)	20:16	20:52	21:13
23	07:53		07:14	07:24	07:44 (39)	06:29	05:50	05:41
	17:21		18:03	19:39	20 08:04 (39)	20:18	20:53	21:13
24	07:52		07:12	07:22	07:42 (39)	06:27	05:50	05:41
	17:22		18:04	19:41	22 08:04 (39)	20:19	20:54	21:14
25	07:52		07:10	07:20	07:41 (39)	06:26	05:49	05:41
	17:24		18:06	19:42	24 08:05 (39)	20:20	20:55	21:14
26	07:51		07:09	07:19	07:39 (39)	06:24	05:48	05:42
	17:25		18:07	19:43	26 08:05 (39)	20:21	20:56	21:14
27	07:50		07:07	07:17	07:37 (39)	06:23	05:47	05:42
	17:27		18:08	19:44	27 08:04 (39)	20:23	20:57	21:14
28	07:49		07:05	07:15	07:35 (39)	06:21	05:46	05:42
	17:28		18:10	19:46	29 08:04 (39)	20:24	20:58	21:14
29	07:48			07:13	07:33 (39)	06:20	05:46	05:43
	17:29			19:47	30 08:03 (39)	20:25	20:59	21:14
30	07:47			07:11	07:31 (39)	06:18	05:45	05:43
	17:31			19:48	32 08:03 (39)	20:26	21:00	21:14
31	07:46			07:09	07:29 (39)		05:45	
	17:32			19:49	33 08:02 (39)		21:01	
Potential sun hours	287	292	369	403	458	464		
Total, worst case	254		297	171				
Sun reduction	0.57		0.59	0.61				
Oper. time red.	0.98		0.98	0.98				
Wind dir. red.	0.70		0.60	0.60				
Total reduction	0.39		0.35	0.36				
Total, real	100		103	61				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H253 - H253

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:02	07:41 08:13 (40)
	21:14	20:52	20:05	19:09	17:15	16:47 16 08:29 (40)
2	05:44	06:12	06:48	07:23	07:03	07:42 08:13 (40)
	21:14	20:51	20:03	19:07	17:14	16:47 17 08:30 (40)
3	05:45	06:13	06:49	07:25	07:04	07:43 08:12 (40)
	21:13	20:50	20:01	19:05	17:13	16:46 19 08:31 (40)
4	05:46	06:14	06:50	07:26	07:06	07:44 08:12 (40)
	21:13	20:49	19:59	19:03	17:11	16:46 19 08:31 (40)
5	05:46	06:16	06:52	07:27	07:07	07:45 08:12 (40)
	21:13	20:47	19:57	19:02	17:10	16:46 20 08:32 (40)
6	05:47	06:17	06:53	07:28	07:08	07:46 08:12 (40)
	21:13	20:46	19:56	19:00	17:09	16:46 21 08:33 (40)
7	05:48	06:18	06:54	07:29	07:10	07:47 08:13 (40)
	21:12	20:45	19:54	18:56	17:07	16:46 21 08:34 (40)
8	05:48	06:19	06:55	07:31	07:11	07:48 08:14 (40)
	21:12	20:43	19:52	18:54	17:06	16:45 21 08:35 (40)
9	05:49	06:20	06:56	07:32	07:12	07:49 08:14 (40)
	21:12	20:42	19:50	18:53	17:05	16:45 21 08:35 (40)
10	05:50	06:21	06:57	07:33	07:14	07:50 08:15 (40)
	21:11	20:40	19:48	18:51	17:04	16:45 20 08:35 (40)
11	05:51	06:22	06:59	07:34	07:15	07:51 08:16 (40)
	21:11	20:39	19:46	18:49	17:03	16:45 20 08:36 (40)
12	05:51	06:24	07:00	07:36	07:17	07:52 08:17 (40)
	21:10	20:38	19:45	18:47	17:02	16:45 20 08:37 (40)
13	05:52	06:25	07:01	07:37	07:18	07:53 08:18 (40)
	21:10	20:36	19:43	18:46	17:00	16:46 19 08:37 (40)
14	05:53	06:26	07:02	07:38	07:19	07:53 08:19 (40)
	21:09	20:35	19:41	18:44	16:59	16:46 19 08:38 (40)
15	05:54	06:27	07:03	07:39	07:21	07:54 08:20 (40)
	21:08	20:33	19:39	18:42	16:58	16:46 19 08:39 (40)
16	05:55	06:28	07:04	07:41	07:22	07:55 08:20 (40)
	21:08	20:32	19:37	18:40	16:57	16:46 19 08:39 (40)
17	05:56	06:29	07:06	07:42	07:23	07:56 08:21 (40)
	21:07	20:30	19:35	18:39	16:56	16:46 18 08:39 (40)
18	05:57	06:31	07:07	07:43	07:24	07:56 08:22 (40)
	21:06	20:28	19:33	18:37	16:56	16:47 18 08:40 (40)
19	05:58	06:32	07:08	07:44	07:26	07:57 08:22 (40)
	21:05	20:27	19:31	18:35	16:55	16:47 18 08:40 (40)
20	05:59	06:33	07:09	07:46	07:27	07:58 08:23 (40)
	21:05	20:25	19:30	18:34	16:54	16:47 18 08:41 (40)
21	06:00	06:34	07:10	07:47	07:28	07:58 08:23 (40)
	21:04	20:24	19:28	18:32	16:53	16:48 18 08:41 (40)
22	06:01	06:35	07:11	07:48	07:30	07:59 08:24 (40)
	21:03	20:22	19:26	18:30	16:52	16:48 18 08:42 (40)
23	06:02	06:36	07:13	07:49	07:31	07:59 08:24 (40)
	21:02	20:20	19:24	18:29	16:52	16:49 18 08:42 (40)
24	06:03	06:38	07:14	07:51	07:32	08:00 08:25 (40)
	21:01	20:19	19:22	18:27	16:51	16:50 18 08:43 (40)
25	06:04	06:39	07:15	07:52	07:33	08:00 08:25 (40)
	21:00	20:17	19:20	18:26	16:50	16:50 18 08:43 (40)
26	06:05	06:40	07:16	07:54	07:35	08:00 08:25 (40)
	20:59	20:15	19:18	18:24	16:50	16:51 18 08:43 (40)
27	06:06	06:41	07:17	07:55	07:36	08:18 (40) 08:01 08:26 (40)
	20:58	20:13	19:16	18:23	16:49	3 08:21 (40) 16:51 19 08:45 (40)
28	06:07	06:42	07:19	07:56	07:37	08:15 (40) 08:01 08:26 (40)
	20:57	20:12	19:15	18:21	16:48	9 08:24 (40) 16:52 19 08:45 (40)
29	06:08	06:43	07:20	07:58	07:38	08:14 (40) 08:01 08:26 (40)
	20:56	20:10	19:13	18:20	16:48	12 08:26 (40) 16:53 19 08:45 (40)
30	06:09	06:45	07:21	07:59	07:39	08:14 (40) 08:01 08:26 (40)
	20:55	20:08	19:11	18:18	16:48	14 08:28 (40) 16:54 19 08:45 (40)
31	06:10	06:46		08:00		08:01 08:26 (40)
	20:54	20:06		18:17		16:55 20 08:46 (40)
Potential sun hours	470	435	377	341	289	276
Total, worst case			474		38	587
Sun reduction			0.69		0.50	0.49
Oper. time red.			0.98		0.98	0.98
Wind dir. red.			0.60		0.70	0.70
Total reduction			0.41		0.34	0.34
Total, real			192		13	198

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H254 - H254

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56 17:34	07:45 18:11	07:04 18:11	07:08 19:51	06:17 20:27	07:21 (38) 05:44	05:44 21:01	06:11 21:14	06:47 20:52	07:09 (38) 41	07:22 17:15	07:02 16:47
2	08:02 16:57 17:35	07:43 18:12	07:02 18:12	07:06 19:52	06:15 20:29	05:44 21:02	05:45 21:14	06:12 20:51	06:48 20:03	07:10 (38) 39	07:23 17:14	07:03 16:47
3	08:02 16:58 17:36	07:42 18:14	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:11 (38) 37	07:25 17:05	07:04 16:46
4	08:02 16:59 17:38	07:41 18:15	06:59 18:15	07:02 19:54	06:12 20:31	05:43 21:04	05:46 21:13	06:15 20:49	06:50 19:59	07:12 (38) 35	07:26 17:11	07:06 16:46
5	08:02 17:00 17:39	07:40 18:16	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:05	05:46 21:13	06:16 20:47	06:52 19:57	07:13 (38) 33	07:27 17:02	07:07 16:46
6	08:02 17:01 17:41	07:39 18:18	06:55 18:18	06:58 19:57	06:10 20:34	05:42 21:05	05:47 21:13	06:17 20:46	06:53 19:56	07:14 (38) 30	07:28 17:09	07:08 16:46
7	08:01 17:02 17:42	07:37 18:19	06:53 18:19	06:57 19:58	06:08 20:35	05:41 21:06	05:48 21:12	06:18 20:45	06:54 19:54	07:15 (38) 28	07:29 17:07	07:10 16:46
8	08:01 17:03 17:43	07:36 18:20	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:17 (38) 25	07:31 17:06	07:11 16:46
9	08:01 17:04 17:45	07:35 18:22	07:50 18:22	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:12	06:20 20:42	06:56 19:50	07:18 (38) 22	07:32 17:05	07:12 16:45
10	08:01 17:05 17:46	07:33 18:23	07:48 18:23	06:51 20:02	06:04 20:38	05:41 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:19 (38) 19	07:33 17:04	07:14 16:45
11	08:00 17:06 17:48	07:32 18:24	07:46 18:24	06:50 20:03	06:03 20:39	05:40 21:09	05:51 21:11	06:23 20:39	06:59 19:46	07:20 (38) 15	07:34 17:03	07:15 16:45
12	08:00 17:07 17:49	07:31 18:25	07:44 18:25	06:48 20:04	06:02 20:41	05:40 21:09	05:51 21:10	06:24 20:38	07:00 19:45	07:21 (38) 10	07:36 17:02	07:17 16:46
13	08:00 17:08 17:50	07:29 18:27	07:43 18:27	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:28 (38) 17	07:37 (38) 17	07:37 17:01	07:52 16:46
14	07:59 17:10 17:52	07:28 18:28	07:41 18:28	06:44 20:07	06:00 20:43	05:40 21:10	05:53 21:09	06:26 20:35	07:21 (38) 22	07:43 (38) 26	07:43 17:03	07:38 16:46
15	07:59 17:11 17:53	07:26 18:29	07:39 18:29	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:19 (38) 22	07:43 (38) 26	07:39 17:03	07:39 16:46
16	07:58 17:12 17:55	07:25 18:31	07:37 18:31	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:08	06:28 20:32	07:17 (38) 29	07:46 (38) 32	07:41 17:06	07:41 16:46
17	07:57 17:13 17:56	07:23 18:32	07:35 18:32	06:39 20:10	05:56 20:46	05:40 21:12	05:56 21:07	06:30 20:30	07:15 (38) 32	07:48 (38) 36	07:35 17:06	07:42 16:46
18	07:57 17:15 17:57	07:22 18:33	07:33 18:33	06:37 20:12	05:55 20:47	05:40 21:12	05:57 21:06	06:31 20:28	07:14 (38) 34	07:48 (38) 38	07:33 17:07	07:43 16:47
19	07:56 17:16 17:59	07:20 18:34	07:32 18:34	06:36 20:13	05:54 20:49	05:40 21:12	05:58 21:05	06:32 20:27	07:12 (38) 37	07:49 (38) 41	07:08 17:08	07:45 16:47
20	07:56 17:17 18:00	07:19 18:36	07:30 18:36	06:34 20:14	05:53 20:50	05:40 21:13	05:59 21:05	06:33 20:25	07:11 (38) 38	07:49 (38) 42	07:09 17:10	07:46 16:48
21	07:55 17:19 18:00	07:17 18:37	07:28 18:37	06:32 20:15	05:52 20:51	05:40 21:13	06:00 21:04	06:34 20:24	07:11 (38) 40	07:51 (38) 44	07:10 17:28	07:47 16:48
22	07:54 17:20 18:02	07:15 18:38	07:26 18:38	06:31 20:16	05:51 20:52	05:41 21:13	06:01 21:03	06:35 20:22	07:10 (38) 41	07:51 (38) 45	07:11 17:26	07:48 16:48
23	07:53 17:21 18:03	07:14 18:39	07:24 18:39	06:29 20:18	05:51 20:53	05:41 21:13	06:02 21:02	06:36 20:20	07:09 (38) 42	07:51 (38) 46	07:13 17:24	07:50 16:49
24	07:52 17:23 18:04	07:12 18:40	07:22 18:40	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:08 (38) 44	07:51 (38) 48	07:14 17:22	07:51 16:50
25	07:52 17:24 18:06	07:10 18:42	07:20 18:42	06:26 20:20	05:49 20:55	05:41 21:14	06:04 21:00	06:39 20:17	07:07 (38) 45	07:52 (38) 49	07:15 17:18	07:52 16:50
26	07:51 17:25 18:07	07:09 18:43	07:19 18:43	06:24 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:07 (38) 44	07:53 (38) 48	07:16 17:18	07:54 16:51
27	07:50 17:27 18:08	07:07 18:44	07:17 18:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:13	07:06 (38) 45	07:54 (38) 49	07:17 17:19	07:55 16:52
28	07:49 17:28 18:10	07:05 18:46	07:15 18:46	06:21 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:42 20:12	07:06 (38) 45	07:55 (38) 49	07:19 17:15	07:56 16:52
29	07:48 17:29 18:11	07:13 18:47	07:13 18:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	07:05 (38) 46	07:56 (38) 50	07:20 17:21	07:58 16:53
30	07:47 17:31 18:13	07:11 18:48	07:11 18:48	06:18 20:26	05:45 21:00	05:43 21:14	06:09 20:55	06:45 20:08	07:07 (38) 44	07:57 (38) 48	07:21 17:11	07:59 16:54
31	07:46 17:32	07:09 18:49	07:29 (38) 07:38 (38)	05:45 21:01	05:45 21:01	05:40 21:10	06:10 20:54	06:46 20:06	07:08 (38) 43	07:51 (38) 47	08:00 17:17	08:01 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case			9	1032	5	723	334					
Sun reduction			0.59	0.61	0.65	0.74	0.69					
Oper. time red.			0.98	0.98	0.98	0.98	0.98					
Wind dir. red.			0.57	0.57	0.57	0.57	0.57					
Total reduction			0.33	0.34	0.36	0.41	0.38					
Total, real			3	349	2	297	128					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H255 - H255

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	07:28 (38) 20:28	06:17 19:51	05:44 21:01	06:11 21:14	06:47 20:52	19:33 (35) 20:05	07:22 19:09	07:02 17:15
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	07:26 (38) 20:29	06:15 19:52	05:44 21:02	06:12 21:14	06:48 20:51	19:38 (35) 20:03	07:23 19:07	07:03 17:14
3	08:02 16:58	07:42 17:36	07:00 18:14	07:04 19:53	07:24 (38) 20:30	06:14 19:53	05:43 21:03	06:13 21:13	06:49 20:50	19:36 (35) 20:01	07:25 19:05	07:04 17:13
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	07:22 (38) 20:31	06:13 19:54	05:43 21:04	06:15 21:13	06:51 20:49	19:36 (35) 20:01	07:26 19:04	07:06 17:11
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	07:20 (38) 20:32	06:11 19:56	05:42 21:05	06:16 21:13	06:52 20:47	19:38 (35) 20:02	07:27 19:02	07:07 17:10
6	08:02 17:01	07:39 17:41	06:55 18:18	06:58 19:57	07:19 (38) 20:34	06:10 19:57	05:42 21:05	06:17 21:13	06:53 20:46	19:38 (35) 20:02	07:28 19:00	07:08 17:09
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	07:18 (38) 20:35	06:08 19:58	05:41 21:06	06:18 21:12	06:54 20:45	19:38 (35) 20:02	07:29 18:56	07:10 17:07
8	08:01 17:03	07:36 17:43	07:52 18:20	06:55 19:59	07:19 (38) 20:36	06:07 19:59	05:41 21:07	06:19 21:12	06:55 20:43	19:38 (35) 20:02	07:31 18:54	07:11 17:06
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	07:21 (38) 20:37	06:06 19:59	05:41 21:08	06:20 21:12	06:56 20:42	19:38 (35) 20:02	07:32 18:53	07:13 17:05
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	07:24 (38) 20:38	06:05 19:59	05:41 21:08	06:21 21:11	06:57 20:41	19:38 (35) 20:02	07:33 18:51	07:14 17:04
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	19:34 (35) 20:40	06:03 19:59	05:40 21:09	06:23 21:11	06:59 20:39	19:38 (35) 20:02	07:34 18:49	07:15 17:03
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	19:33 (35) 20:41	06:02 19:59	05:40 21:09	06:24 21:10	07:00 20:38	19:38 (35) 20:02	07:36 18:47	07:17 17:02
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:05	19:32 (35) 20:42	06:01 19:59	05:40 21:10	06:25 21:10	07:01 20:36	19:38 (35) 20:02	07:37 18:46	07:18 17:01
14	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:05	19:32 (35) 20:42	06:01 19:59	05:40 21:10	06:25 21:10	07:01 20:36	19:38 (35) 20:02	07:37 18:46	07:18 17:01
15	08:00 17:09	07:29 17:51	07:43 19:28	06:46 20:06	19:32 (35) 20:43	06:01 19:59	05:40 21:10	06:25 21:10	07:01 20:36	19:38 (35) 20:02	07:37 18:46	07:18 17:01
16	08:00 17:10	07:28 17:52	07:41 19:28	06:44 20:07	19:33 (35) 20:43	06:00 19:59	05:40 21:10	06:26 21:09	07:02 20:35	19:38 (35) 20:02	07:38 18:44	07:19 16:59
17	08:00 17:11	07:26 17:53	07:39 19:29	06:43 20:08	19:33 (35) 20:44	05:59 19:59	05:40 21:11	06:27 21:08	07:03 20:33	19:38 (35) 20:02	07:39 18:42	07:21 16:58
18	08:00 17:12	07:25 17:55	07:37 19:31	06:41 20:09	19:33 (35) 20:45	05:57 19:59	05:40 21:11	06:28 21:08	07:04 20:32	19:38 (35) 20:02	07:41 18:40	07:22 16:57
19	08:00 17:13	07:23 17:56	07:35 19:32	06:39 20:10	19:34 (35) 20:46	05:56 19:59	05:40 21:12	06:30 21:07	07:06 20:30	19:38 (35) 20:02	07:42 18:39	07:23 16:57
20	08:00 17:13	07:22 17:56	07:33 19:32	06:37 20:10	19:35 (35) 20:46	05:55 19:59	05:40 21:12	06:31 21:07	07:07 20:30	19:38 (35) 20:02	07:43 18:39	07:25 16:57
21	08:00 17:15	07:22 17:57	07:33 19:33	06:37 20:12	19:35 (35) 20:47	05:55 19:59	05:40 21:12	06:31 21:06	07:07 20:28	19:38 (35) 20:02	07:43 18:37	07:25 16:57
22	08:00 17:15	07:20 17:57	07:32 19:33	06:36 20:12	19:38 (35) 20:47	05:54 19:59	05:40 21:12	06:32 21:05	07:08 20:27	19:38 (35) 20:02	07:45 18:35	07:26 16:55
23	08:00 17:16	07:19 17:59	07:30 19:34	06:34 20:13	19:43 (35) 20:49	05:53 19:59	05:40 21:12	06:33 21:05	07:09 20:27	19:38 (35) 20:02	07:46 18:34	07:27 16:54
24	08:00 17:17	07:17 18:00	07:28 19:36	06:32 20:14	19:43 (35) 20:50	05:52 19:59	05:40 21:13	06:34 21:05	07:10 20:25	19:38 (35) 20:02	07:47 18:34	07:28 16:54
25	08:00 17:17	07:15 18:00	07:26 19:37	06:31 20:15	19:43 (35) 20:51	05:51 19:59	05:40 21:13	06:35 21:04	07:11 20:24	19:38 (35) 20:02	07:48 18:32	07:30 16:53
26	08:00 17:20	07:14 18:02	07:24 19:38	06:29 20:16	19:43 (35) 20:52	05:51 19:59	05:40 21:13	06:37 21:03	07:13 20:22	19:38 (35) 20:02	07:50 18:30	07:31 16:52
27	08:00 17:21	07:12 18:03	07:22 19:39	06:28 20:18	19:43 (35) 20:53	05:50 19:59	05:40 21:14	06:38 21:02	07:14 20:20	19:38 (35) 20:02	07:51 18:29	07:32 16:52
28	08:00 17:23	07:11 18:04	07:20 19:41	06:26 20:19	19:43 (35) 20:54	05:49 19:59	05:40 21:14	06:39 21:01	7 19:48 (35) 19:22	19:38 (35) 20:02	07:52 18:27	07:34 16:51
29	08:00 17:24	07:09 18:06	07:19 19:42	06:24 20:20	19:43 (35) 20:55	05:48 19:59	05:40 21:14	06:40 21:00	12 19:50 (35) 19:20	19:36 (35) 20:02	07:54 18:26	07:35 16:50
30	08:00 17:25	07:07 18:07	07:17 19:43	06:23 20:21	19:43 (35) 20:56	05:47 19:59	05:40 21:14	06:41 20:59	14 19:50 (35) 19:18	19:35 (35) 20:02	07:55 18:24	07:36 16:50
31	08:00 17:27	07:05 18:08	07:15 19:44	06:21 20:23	19:43 (35) 20:57	05:47 19:59	05:40 21:14	06:42 20:58	13 19:48 (35) 19:16	19:34 (35) 20:02	07:56 18:23	07:37 16:49
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case			37	264				91	218			
Sun reduction			0.59	0.61				0.74	0.69			
Oper. time red.			0.98	0.98				0.98	0.98			
Wind dir. red.			0.58	0.60				0.62	0.58			
Total reduction			0.33	0.35				0.45	0.39			
Total, real			12	94				41	86			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H257 - H257

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	08:42 (37)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	11 08:53 (37)	17:34	18:11	19:51	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	08:43 (37)	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	9 08:52 (37)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	08:45 (37)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:58	6 08:51 (37)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	08:48 (37)	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	1 08:49 (37)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02		07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00		17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02		07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01		17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01		07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02		17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46
8	08:01		07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03		17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01		07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04		17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01		07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05		17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00		07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06		17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00		07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07		17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00		07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08		17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59		07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10		17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59		07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11		17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58		07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12		17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58		07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13		17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57		07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15		17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56		07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16		17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56		07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17		18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55		07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19		18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54		07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20		18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53		07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21		18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53		07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23		18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52		07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24		18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51		07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25		18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27		18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49		07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28		18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48			07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29			19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47			07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31			19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46			07:09		05:45		06:10	06:46		08:00		08:02
	17:32			19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	331
Total, worst case		27											0.49
Sun reduction		0.57											0.98
Oper. time red.		0.98											0.70
Wind dir. red.		0.70											0.34
Total reduction		0.39											0.34
Total, real		11											111

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H258 - H258

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
948 364 341 373 483 625 1,207 923 579 685 869 1,169 8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	07:45	07:04	07:38 (35)	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	
	16:56	17:34	18:11	08:16 (35)	19:51	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47	
2	08:02	07:44	07:02	07:38 (35)	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42	
	16:57	17:35	18:12	08:15 (35)	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:39 (35)	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43	
	16:58	17:37	18:14	08:14 (35)	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47	
4	08:02	07:41	06:59	07:39 (35)	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44	
	16:59	17:38	18:15	08:12 (35)	19:54	20:31	21:04	21:13	20:49	19:59	19:04	2 08:31 (35)	17:11	16:46
5	08:02	07:40	06:57	07:40 (35)	07:00	06:11	05:42	05:46	06:16	06:52	07:27	08:24 (35)	07:07	07:45
	17:00	17:39	18:16	08:11 (35)	19:56	20:32	21:05	21:13	20:47	19:58	19:02	15 08:39 (35)	17:10	16:46
6	08:02	07:39	06:55	07:42 (35)	06:59	06:10	05:42	05:47	06:17	06:53	07:28	08:21 (35)	07:09	07:46
	17:01	17:41	18:18	08:10 (35)	19:57	20:34	21:06	21:13	20:46	19:56	19:00	21 08:42 (35)	17:09	16:46
7	08:02	07:37	06:53	07:44 (35)	06:57	06:09	05:41	05:48	06:18	06:54	07:30	08:19 (35)	07:10	07:47
	17:02	17:42	18:19	08:07 (35)	19:58	20:35	21:06	21:12	20:45	19:54	18:56	25 08:44 (35)	17:08	16:46
8	08:01	07:36	07:52	08:46 (35)	06:55	06:07	05:41	05:49	06:19	06:55	07:31	08:17 (35)	07:11	07:48
	17:03	17:44	18:20	09:04 (35)	19:59	20:36	21:07	21:12	20:43	19:52	18:55	29 08:46 (35)	17:06	16:46
9	08:01	07:35	07:50	08:49 (35)	06:53	06:06	05:41	05:49	06:20	06:56	07:32	08:15 (35)	07:13	07:49
	17:04	17:45	19:22	09:00 (35)	20:01	20:37	21:08	21:12	20:42	19:50	18:53	31 08:46 (35)	17:05	16:46
10	08:01	07:33	07:48	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	08:13 (35)	07:14	07:50
	17:05	17:46	19:23	07:48	20:02	20:38	21:08	21:11	20:41	19:48	18:51	34 08:47 (35)	17:04	16:46
11	08:00	07:32	07:53 (35)	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	08:13 (35)	07:15	07:51
	17:06	17:48	12 08:05 (35)	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	35 08:48 (35)	17:03	16:46
12	08:00	07:31	07:52 (35)	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	08:12 (35)	07:17	07:52
	17:07	17:49	16 08:08 (35)	19:26	20:04	1 07:09 (36)	20:41	21:09	21:10	19:45	18:47	37 08:49 (35)	17:02	16:46
13	08:00	07:29	07:50 (35)	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	08:10 (35)	07:18	07:53
	17:09	17:51	20 08:10 (35)	19:27	20:05	5 07:11 (36)	20:42	21:10	21:10	19:43	18:46	39 08:49 (35)	17:01	16:46
14	07:59	07:28	07:49 (35)	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	40 08:10 (35)	07:19	07:54
	17:10	17:52	23 08:12 (35)	19:28	20:07	8 07:13 (36)	20:43	21:11	21:09	20:35	7 07:11 (36)	19:41	18:44	16:46
15	07:59	07:26	07:47 (35)	07:39	06:43	06:03	05:40	05:54	06:27	07:01	07:36	07:03	07:40	07:54
	17:11	17:53	26 08:13 (35)	19:29	20:08	10 07:13 (36)	20:44	21:11	21:08	20:33	13 07:14 (36)	19:39	18:42	16:46
16	07:58	07:25	07:46 (35)	07:37	06:41	06:01	05:40	05:55	06:28	06:59	07:36	07:05	07:41	07:55
	17:12	17:55	29 08:15 (35)	19:31	20:09	13 07:14 (36)	20:45	21:11	21:08	20:32	16 07:15 (36)	19:37	18:41	16:46
17	07:58	07:23	07:44 (35)	07:35	06:39	07:00 (36)	05:56	05:40	05:56	06:30	06:57 (36)	07:06	07:42	07:56
	17:13	17:56	31 08:15 (35)	19:32	20:10	15 07:15 (36)	20:46	21:12	21:07	20:30	19 07:16 (36)	19:35	18:39	16:47
18	07:57	07:22	07:43 (35)	07:34	06:38	06:58 (36)	05:55	05:40	05:57	06:31	06:56 (36)	07:07	07:43	07:56
	17:15	17:58	33 08:16 (35)	19:33	20:12	16 07:14 (36)	20:48	21:12	21:06	20:29	21 07:17 (36)	19:33	18:37	16:47
19	07:56	07:20	07:41 (35)	07:32	06:36	06:56 (36)	05:54	05:40	05:58	06:32	06:55 (36)	07:08	07:45	07:57
	17:16	17:59	36 08:17 (35)	19:34	20:13	18 07:14 (36)	20:49	21:13	21:06	20:27	22 07:17 (36)	19:32	18:35	16:47
20	07:56	07:19	07:40 (35)	07:30	06:34	06:55 (36)	05:53	05:40	05:59	06:33	06:56 (36)	07:09	07:46	07:58
	17:17	18:00	38 08:18 (35)	19:36	20:14	19 07:14 (36)	20:50	21:13	21:05	20:25	23 07:19 (36)	19:30	18:34	16:48
21	07:55	07:17	07:38 (35)	07:28	06:33	06:53 (36)	05:52	05:40	06:00	06:34	06:57 (36)	07:10	07:47	07:58
	17:19	18:00	40 08:18 (35)	19:37	20:15	21 07:14 (36)	20:51	21:13	21:04	20:24	22 07:19 (36)	19:28	18:32	16:48
22	07:54	07:16	07:37 (35)	07:26	06:31	06:51 (36)	05:52	05:41	06:01	06:35	06:58 (36)	07:12	07:49	07:59
	17:20	18:02	40 08:17 (35)	19:38	20:17	22 07:13 (36)	20:52	21:13	21:03	20:22	21 07:19 (36)	19:26	18:31	16:49
23	07:53	07:14	07:38 (35)	07:24	06:29	06:50 (36)	05:51	05:41	06:02	06:37	06:59 (36)	07:13	07:50	07:59
	17:21	18:03	40 08:18 (35)	19:39	20:18	23 07:13 (36)	20:53	21:14	21:02	20:20	19 07:18 (36)	19:24	18:29	16:49
24	07:53	07:12	07:37 (35)	07:22	06:28	06:49 (36)	05:50	05:41	06:03	06:38	07:00 (36)	07:14	07:51	08:00
	17:23	18:04	41 08:18 (35)	19:41	20:19	23 07:12 (36)	20:54	21:14	21:01	20:19	18 07:18 (36)	19:22	18:27	16:50
25	07:52	07:11	07:37 (35)	07:21	06:26	06:50 (36)	05:49	05:42	06:04	06:39	07:01 (36)	07:15	07:52	08:00
	17:24	18:06	40 08:17 (35)	19:42	20:20	21 07:11 (36)	20:55	21:14	21:00	20:17	16 07:17 (36)	19:20	18:26	16:50
26	07:51	07:09	07:37 (35)	07:19	06:25	06:51 (36)	05:48	05:42	06:05	06:40	07:02 (36)	07:16	07:54	08:00
	17:25	18:07	41 08:18 (35)	19:43	20:22	18 07:09 (36)	20:56	21:14	20:59	20:15	14 07:16 (36)	19:18	18:24	16:51
27	07:50	07:07	07:37 (35)	07:17	06:23	06:52 (36)	05:47	05:42	06:06	06:41	07:03 (36)	07:17	07:55	08:01
	17:27	18:08	40 08:17 (35)	19:44	20:23	16 07:08 (36)	20:57	21:14	20:58	20:14	12 07:15 (36)	19:17	18:23	16:52
28	07:49	07:06	07:37 (35)	07:15	06:21	06:54 (36)	05:47	05:43	06:07	06:42	07:04 (36)	07:19	07:56	08:01
	17:28	18:10	39 08:16 (35)	19:46	20:24	12 07:06 (36)	20:58	21:14	20:57	20:12	10 07:14 (36)	19:15	18:21	16:52
29	07:48	07:05	07:37 (35)	07:13	06:20	06:57 (36)	05:46	05:43	06:08	06:44	07:06 (36)	07:20	07:58	08:01
	17:30	18:12	40 08:17 (35)	19:47	20:25	5 07:02 (36)	20:59	21:14	20:56	20:10	8 07:14 (36)	19:13	18:20	16:53
30	07:47	07:04	07:37 (35)	07:11	06:18	06:54 (36)	05:45	05:44	06:09	06:45	07:07 (36)	07:21	07:59	08:01
	17:31	18:13	40 08:18 (35)	19:48	20:26	20:17	21:00	21:14	20:55	20:08	5 07:12 (36)	19:11	18:18	16:54
31	07:46	07:03	07:37 (35)	07:10	06:17	06:53 (36)	05:44	05:43	06:08	06:44	07:08 (36)	07:22	08:00	08:02
	17:32	18:14	39 08:17 (35)	19:49	20:27	21:01	21:01	20:54	20:07	1 07:09 (36)	07:10	18:17	11 08:34 (35)	16:55
Potential sun hours	287	292	369	403	458	464	470	435	267	377	341	844	289	276
Total, worst case		585	254	266										
Sun reduction		0.59	0.59	0.61					0.74			0.63		
Oper. time red.		0.98	0.98	0.98					0.98			0.98		
Wind dir. red.		0.65	0.65	0.54					0.54			0.65		
Total reduction		0.37	0.37	0.32					0.39			0.40		
Total, real		218	95	86					104			336		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H259 - H259

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H260 - H260

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H261 - H261

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H262 - H262

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H278 - H278

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H279 - H279

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H280 - H280

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H281 - H281

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	07:45	07:04	07:08	07:28 (22)	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	15 07:43 (22)	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	07:27 (22)	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	15 07:42 (22)	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	07:29 (22)	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	10 07:39 (22)	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46	
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46	
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46	
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46	
7	08:02	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47	
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46	
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46	
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32 (22)	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	10 07:33 (22)	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:21 (22)	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	14 07:35 (22)	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:20 (22)	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	15 07:32 (22)	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:21 (22)	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	15 07:36 (22)	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:22 (22)	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	14 07:36 (22)	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:23 (22)	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	13 07:36 (22)	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:25 (22)	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	11 07:36 (22)	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:26 (22)	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	10 07:36 (22)	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:27 (22)	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	8 07:35 (22)	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:28 (22)	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	6 07:34 (22)	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:29 (22)	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	3 07:32 (22)	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09		07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30		18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10		07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28		18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12		07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26		18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13		07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24		18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14		07:51	07:32	08:00
	17:23	18:04	19:41	2 07:45 (22)	20:19	20:54	21:14	21:01	19:22		18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15		07:53	07:34	08:00
	17:24	18:06	19:42	5 07:46 (22)	20:20	20:55	21:14	21:00	19:20		18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16		07:54	07:35	08:01
	17:25	18:07	19:43	7 07:46 (22)	20:22	20:56	21:14	20:59	19:18		18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18		07:55	07:36	08:01
	17:27	18:08	19:44	9 07:46 (22)	20:23	20:57	21:14	20:58	19:17		18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19		07:57	07:37	08:01
	17:28	18:10	19:46	11 07:46 (22)	20:24	20:58	21:14	20:57	19:15		18:21	16:49	16:52
29	07:48	07:13	07:33 (22)	06:20	05:46	05:43	06:08	06:44	07:20		07:58	07:39	08:01
	17:30	18:11	19:47	13 07:46 (22)	20:25	20:59	21:14	20:56	19:13		18:20	16:48	16:53
30	07:47	07:11	07:31 (22)	06:18	05:45	05:44	06:09	06:45	07:21		07:59	07:40	08:02
	17:31	18:12	19:48	14 07:45 (22)	20:26	21:00	21:14	20:55	19:11		18:18	16:48	16:54
31	07:46	07:10	07:30 (22)		05:45	06:10	06:46				08:01		08:02
	17:32	18:13	19:49	15 07:45 (22)	21:01	21:01	20:54	20:07			18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	
Total, worst case			76	40					119				
Sun reduction			0.59	0.61					0.69				
Oper. time red.			0.98	0.98					0.98				
Wind dir. red.			0.59	0.59					0.59				
Total reduction			0.34	0.35					0.40				
Total, real			26	14					47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H282 - H282

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H283 - H283

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
948 364 341 373 483 625 1,207 923 579 685 869 1,169 8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	07:32 (22) 08:12 (22)	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:39 (22) 19:09	07:22 17:15	07:41 16:47
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52	07:31 (22) 08:11 (22)	06:15 20:29	05:44 21:02	05:45 21:14	06:12 20:51	06:48 20:03	07:36 (22) 19:07	07:23 17:14	07:03 16:47
3	08:02 16:58	07:42 17:36	07:00 18:14	07:04 19:53	07:31 (22) 08:10 (22)	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:49 20:01	07:33 (22) 19:05	07:25 17:13	07:05 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	07:31 (22) 08:09 (22)	06:13 20:31	05:43 21:04	05:46 21:13	06:15 20:49	06:51 19:59	07:31 (22) 19:04	07:26 17:11	07:06 16:46
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	07:32 (22) 08:08 (22)	06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:48	06:52 19:58	07:30 (22) 19:02	07:27 17:10	07:07 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	07:33 (22) 08:07 (22)	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:28 (22) 19:00	07:28 17:09	07:09 16:46
7	08:02 17:02	07:37 17:42	06:53 18:19	06:57 19:58	07:34 (22) 08:06 (22)	06:08 20:35	05:41 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:28 (22) 18:56	07:30 17:08	07:10 16:46
8	08:01 17:03	07:36 17:44	07:52 18:20	06:55 19:59	07:34 (22) 08:04 (22)	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:27 (22) 18:55	07:31 17:06	07:11 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	07:35 (22) 08:02 (22)	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:56 19:50	07:26 (22) 18:53	07:32 17:05	07:13 16:46
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	07:38 (22) 08:00 (22)	06:05 20:38	05:41 21:08	05:50 21:11	06:21 20:41	06:58 19:48	07:25 (22) 18:51	07:33 17:04	07:14 16:45
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	07:40 (22) 07:57 (22)	06:03 20:40	05:40 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:24 (22) 18:49	07:35 17:03	07:15 16:45
12	08:00 17:07	07:31 17:49	07:44 19:26	06:48 20:04	07:43 (22) 07:52 (22)	06:02 20:41	05:40 21:10	05:52 21:10	06:24 20:38	07:00 19:45	07:23 (22) 18:47	07:36 17:02	07:17 16:46
13	08:00 17:08	07:29 17:51	07:43 19:27	06:46 20:06	07:52 (22)	06:01 20:42	05:40 21:10	05:10 21:10	06:25 20:36	07:01 19:43	07:22 (23) 18:46	07:37 17:01	07:18 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:44	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:23 (22) 18:44	07:38 17:00	07:19 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	07:26	05:59 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:03 19:39	07:25 (22) 18:42	07:40 16:59	07:21 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	07:25	05:57 20:45	05:40 21:12	05:55 21:08	06:28 20:32	07:05 19:37	07:26 (22) 18:40	07:41 16:58	07:22 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	07:56 (22) 07:59 (22)	06:39 20:10	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:35	07:27 (22) 18:39	07:42 16:57	07:23 16:47
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	07:54 (22) 08:04 (22)	06:38 20:12	05:40 21:12	05:57 21:06	06:31 20:29	07:07 19:33	07:28 (22) 18:37	07:43 16:56	07:25 16:47
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	07:52 (22) 08:07 (22)	06:36 20:13	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:29 (22) 18:35	07:45 16:55	07:26 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	07:50 (22) 08:09 (22)	06:34 20:14	05:40 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:30 (22) 18:34	07:46 16:54	07:27 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:15	07:48 (22) 08:10 (22)	06:33 20:15	05:40 21:13	06:00 21:04	06:34 20:24	07:10 19:28	07:31 (22) 18:32	07:47 16:53	07:29 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	07:46 (22) 08:11 (22)	06:31 20:17	05:41 21:13	06:01 21:03	06:35 20:22	07:12 19:26	07:33 (22) 18:31	07:49 16:52	07:30 16:49
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	07:44 (22) 08:11 (22)	06:29 20:18	05:41 21:14	06:02 21:02	06:37 20:20	07:13 19:24	07:34 (22) 18:29	07:50 16:52	07:31 16:49
24	07:53 17:23	07:12 18:04	07:22 19:41	06:28 20:19	07:43 (22) 08:13 (22)	06:28 20:19	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:35 (22) 18:27	07:51 16:51	07:32 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	07:41 (22) 08:13 (22)	06:26 20:20	05:41 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:36 (22) 18:26	07:53 16:50	07:34 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:22	07:39 (22) 08:13 (22)	06:24 20:22	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:37 (22) 18:24	07:54 16:50	07:35 16:51
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	07:37 (22) 08:13 (22)	06:23 20:23	05:42 21:14	06:06 20:58	06:41 20:14	07:17 19:17	07:43 (22) 18:23	07:55 16:49	07:36 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	07:35 (22) 08:13 (22)	06:21 20:24	05:43 21:14	06:07 20:57	06:42 20:12	07:19 19:15	07:56 (22) 18:21	07:37 16:49	07:37 16:52
29	07:48 17:29		07:13 19:47	06:20 20:25	07:33 (22) 08:13 (22)	06:20 20:25	05:46 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 (22) 18:20	07:39 16:48	07:39 16:53
30	07:47 17:31		07:11 19:48	06:18 20:26	07:31 (22) 08:12 (22)	06:18 20:26	05:45 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:59 (22) 18:18	07:40 16:48	07:40 16:54
31	07:46 17:32		07:10 19:49	06:17 21:01	07:32 (22) 08:13 (22)	06:17 21:01	05:45 21:14	06:10 20:55	06:46 20:07	07:43 (22) 07:53 (22)	08:00 18:17	07:41 16:48	07:41 16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	
Total, worst case			413	364				10	776				
Sun reduction			0.59	0.61				0.74	0.69				
Oper. time red.			0.98	0.98				0.98	0.98				
Wind dir. red.			0.60	0.60				0.60	0.60				
Total reduction			0.34	0.36				0.43	0.40				
Total, real			142	130				4	313				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H284 - H284

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	08:26 (25)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	08:07 (25)
	16:56	12 08:38 (25)	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47	14 08:21 (25)
2	08:02	08:26 (25)	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42	08:07 (25)
	16:57	13 08:39 (25)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	15 08:22 (25)
3	08:02	08:26 (25)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43	08:08 (25)
	16:58	13 08:39 (25)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47	15 08:23 (25)
4	08:02	08:26 (25)	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44	08:10 (25)
	16:59	13 08:39 (25)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46	15 08:25 (25)
5	08:02	08:26 (25)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	08:11 (25)
	17:00	14 08:40 (25)	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46	15 08:26 (25)
6	08:02	08:26 (25)	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46	08:12 (25)
	17:01	14 08:40 (25)	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46	14 08:26 (25)
7	08:02	08:25 (25)	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47	08:13 (25)
	17:02	14 08:39 (25)	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46	14 08:27 (25)
8	08:01	08:25 (25)	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	08:14 (25)
	17:03	15 08:40 (25)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46	13 08:27 (25)
9	08:01	08:25 (25)	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49	08:15 (25)
	17:04	15 08:40 (25)	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45	13 08:28 (25)
10	08:01	08:24 (25)	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50	08:16 (25)
	17:05	15 08:39 (25)	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45	13 08:29 (25)
11	08:01	08:25 (25)	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51	08:17 (25)
	17:06	14 08:39 (25)	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45	12 08:29 (25)
12	08:00	08:27 (25)	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52	08:17 (25)
	17:07	12 08:39 (25)	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46	12 08:29 (25)
13	08:00	08:28 (25)	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53	08:18 (25)
	17:08	10 08:38 (25)	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46	12 08:30 (25)
14	07:59	08:31 (25)	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54	08:19 (25)
	17:10	6 08:37 (25)	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46	11 08:30 (25)
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54	08:20 (25)	
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46	11 08:31 (25)	
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55	08:21 (25)	
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46	11 08:32 (25)	
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56	08:21 (25)	
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46	11 08:32 (25)	
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56	08:22 (25)	
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47	11 08:33 (25)	
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57	08:22 (25)	
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47	10 08:32 (25)	
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58	08:23 (25)	
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48	10 08:33 (25)	
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58	08:24 (25)	
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48	10 08:34 (25)	
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59	08:24 (25)	
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:48	10 08:34 (25)	
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59	08:24 (25)	
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49	10 08:34 (25)	
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00	08:25 (25)	
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50	10 08:35 (25)	
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00	08:25 (25)	
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	11 08:36 (25)	
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00	08:25 (25)	
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51	11 08:36 (25)	
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01	08:26 (25)	
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52	11 08:37 (25)	
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01	08:26 (25)	
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	6 08:16 (25)	16:52	11 08:37 (25)
29	07:48	07:13	07:23	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01	08:26 (25)	
	17:29	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	10 08:19 (25)	16:53	11 08:37 (25)	
30	07:47	07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:08 (25)	08:02	08:26 (25)	
	17:31	19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	12 08:20 (25)	16:54	12 08:38 (25)	
31	07:46	07:09	07:19	06:25	05:45	05:40	06:10	06:46	07:22	08:00	07:41	08:02	08:26 (25)	
	17:32	19:49	20:27	21:01	21:15	20:54	20:07	19:10	18:17	16:48	12 08:20 (25)	16:55	12 08:38 (25)	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	371	
Total, worst case	180										28		0.49	
Sun reduction	0.57										0.50		0.49	
Oper. time red.	0.98										0.98		0.98	
Wind dir. red.	0.70										0.70		0.70	
Total reduction	0.39										0.34		0.33	
Total, real	70										10		124	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H285 - H285

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	15:53 (22)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
16:56	18	16:11 (22)	17:34	18:11	19:51	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	15:54 (22)	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
16:57	17	16:11 (22)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	15:55 (22)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
16:58	16	16:11 (22)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	15:56 (22)	07:41	06:59	07:02	06:12	05:43	05:46	06:15	06:51	07:26	07:06	07:44
16:59	15	16:11 (22)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	15:58 (22)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
17:00	13	16:11 (22)	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	15:59 (22)	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
17:01	11	16:10 (22)	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	16:00 (22)	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
17:02	8	16:08 (22)	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46
8	08:01	17:03	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
9	08:01	17:04	07:35	07:50	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
10	08:01	17:05	07:33	07:48	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
11	08:00	17:06	07:32	07:46	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
12	08:00	17:07	07:31	07:44	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
13	08:00	17:08	07:29	07:43	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
14	07:59	17:10	07:28	07:41	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
15	07:59	17:11	07:26	07:39	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
16	07:58	17:12	07:25	07:37	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
17	07:58	17:13	07:23	07:35	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:45
18	07:57	17:15	07:22	07:33	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
19	07:56	17:16	07:20	07:32	20:05	20:42	21:10	21:10	20:36	19:43	9	07:36 (26)	18:46
20	07:56	17:17	07:19	07:30	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
21	07:55	17:18	07:17	07:28	20:07	20:43	21:11	21:09	20:35	19:41	14	07:38 (26)	18:44
22	07:54	17:20	07:15	07:26	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
23	07:53	17:21	07:14	07:24	20:08	20:44	21:11	21:08	20:33	19:39	15	07:40 (26)	18:42
24	07:53	17:22	07:12	07:22	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
25	07:52	17:23	07:11	07:21	20:09	20:45	21:11	21:08	20:32	19:37	14	07:40 (26)	18:40
26	07:51	17:24	07:09	07:19	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
27	07:50	17:25	07:07	07:17	20:10	20:46	21:12	21:07	20:30	19:35	13	07:40 (26)	18:39
28	07:49	17:26	07:06	07:15	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
29	07:48	17:27	07:04	07:14	20:12	20:48	21:12	21:06	20:28	19:33	12	07:40 (26)	18:37
30	07:47	17:28	07:03	07:13	06:36	05:54	05:40	05:58	06:32	07:08	07:29	07:45	07:26
31	07:46	17:29	07:02	07:12	20:13	20:49	21:13	21:06	20:27	19:32	11	07:40 (26)	18:35
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	525
Total, worst case	98		114						115				525
Sun reduction	0.57		0.59						0.69				0.49
Oper. time red.	0.98		0.98						0.98				0.98
Wind dir. red.	0.55		0.60						0.60				0.55
Total reduction	0.30		0.34						0.40				0.26
Total, real	30		39						46				138

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H286 - H286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02	07:45	07:04	07:08	06:17	05:44	20:13 (22)
	16:56	17:34	18:11	19:51	20:28	21:01	8 20:21 (22)
2	08:02	07:43	07:02	07:06	06:15	05:43	20:16 (22)
	16:57	17:35	18:12	19:52	20:29	21:02	4 20:20 (22)
3	08:02	07:42	07:00	07:04	07:24 (27)	06:14	05:43
	16:58	17:36	18:14	19:53	1 07:25 (27)	20:30	21:03
4	08:02	07:41	06:59	07:02	07:22 (27)	06:12	05:43
	16:59	17:38	18:15	19:54	4 07:26 (27)	20:31	21:04
5	08:02	07:40	06:57	07:00	07:20 (27)	06:11	05:42
	17:00	17:39	18:16	19:56	7 07:27 (27)	20:32	21:05
6	08:02	07:39	06:55	06:58	07:19 (27)	06:10	05:42
	17:01	17:41	18:18	19:57	9 07:28 (27)	20:34	21:05
7	08:01	07:37	06:53	06:57	07:17 (27)	06:08	05:41
	17:02	17:42	18:19	19:58	10 07:27 (27)	20:35	21:06
8	08:01	07:36	07:52	06:55	07:15 (27)	06:07	20:09 (22)
	17:03	17:43	18:20	19:59	12 07:27 (27)	20:36	3 20:12 (22)
9	08:01	07:35	07:50	06:53	07:13 (27)	06:06	20:08 (22)
	17:04	17:45	19:22	20:00	13 07:26 (27)	20:37	5 20:13 (22)
10	08:01	07:33	07:48	06:51	07:11 (27)	06:04	20:07 (22)
	17:05	17:46	19:23	20:02	14 07:25 (27)	20:38	7 20:14 (22)
11	08:00	07:32	07:46	06:50	07:10 (27)	06:03	20:06 (22)
	17:06	17:48	19:24	20:03	15 07:25 (27)	20:40	9 20:15 (22)
12	08:00	07:31	07:44	06:48	07:09 (27)	06:02	20:06 (22)
	17:07	17:49	19:25	20:04	14 07:23 (27)	20:41	11 20:17 (22)
13	08:00	07:29	07:43	06:46	07:10 (27)	06:01	20:05 (22)
	17:08	17:50	19:27	20:05	11 07:21 (27)	20:42	13 20:18 (22)
14	07:59	07:28	07:41	06:44	07:12 (27)	06:00	20:05 (22)
	17:10	17:52	19:28	20:07	6 07:18 (27)	20:43	14 20:19 (22)
15	07:59	07:26	07:39	06:43		05:59	20:04 (22)
	17:11	17:53	19:29	20:08		20:44	15 20:19 (22)
16	07:58	07:25	07:37	06:41		05:57	20:04 (22)
	17:12	17:55	19:31	20:09		20:45	16 20:20 (22)
17	07:58	07:23	07:35	06:39		05:56	20:04 (22)
	17:13	17:56	19:32	20:10		20:46	17 20:21 (22)
18	07:57	07:22	07:33	06:37		05:55	20:04 (22)
	17:15	17:57	19:33	20:12		20:48	18 20:22 (22)
19	07:56	07:20	07:32	06:36		05:54	20:05 (22)
	17:16	17:59	19:34	20:13		20:49	19 20:24 (22)
20	07:56	07:19	07:30	06:34		05:53	20:05 (22)
	17:17	18:00	19:36	20:14		20:50	20 20:25 (22)
21	07:55	07:17	07:28	06:32		05:52	20:05 (22)
	17:19	18:00	19:37	20:15		20:51	21 20:26 (22)
22	07:54	07:15	07:26	06:31		05:51	20:05 (22)
	17:20	18:02	19:38	20:17		20:52	22 20:27 (22)
23	07:53	07:14	07:24	06:29		05:51	20:05 (22)
	17:21	18:03	19:39	20:18		20:53	22 20:27 (22)
24	07:53	07:12	07:22	06:28		05:50	20:06 (22)
	17:23	18:04	19:41	20:19		20:54	20 20:26 (22)
25	07:52	07:11	07:20	06:26		05:49	20:07 (22)
	17:24	18:06	19:42	20:20		20:55	20 20:27 (22)
26	07:51	07:09	07:19	06:24		05:48	20:07 (22)
	17:25	18:07	19:43	20:21		20:56	19 20:26 (22)
27	07:50	07:07	07:17	06:23		05:47	20:08 (22)
	17:27	18:08	19:44	20:23		20:57	17 20:25 (22)
28	07:49	07:06	07:15	06:21		05:47	20:09 (22)
	17:28	18:10	19:46	20:24		20:58	16 20:25 (22)
29	07:48		07:13	06:20		05:46	20:10 (22)
	17:29		19:47	20:25		20:59	14 20:24 (22)
30	07:47		07:11	06:18		05:45	20:10 (22)
	17:31		19:48	20:26		21:00	13 20:23 (22)
31	07:46		07:09			05:45	20:12 (22)
	17:32		19:49			21:01	11 20:23 (22)
Potential sun hours	287	292	369	403	458	464	
Total, worst case				116	362	12	
Sun reduction				0.61	0.65	0.70	
Oper. time red.				0.98	0.98	0.98	
Wind dir. red.				0.57	0.66	0.66	
Total reduction				0.34	0.42	0.45	
Total, real				39	151	5	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H286 - H286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	20:17 (22) 20:05	06:47 20:05	07:09 (27) 19:09	07:22 17:15
2	05:45 21:14	06:12 20:51	20:17 (22) 20:03	06:48 20:03	07:10 (27) 19:07	07:23 17:14
3	05:45 21:14	06:13 20:50	20:18 (22) 20:01	06:49 20:01	07:11 (27) 19:05	07:25 17:13
4	05:46 21:13	06:15 20:49	20:19 (22) 20:23 (22)	06:51 19:59	07:12 (27) 19:04	07:26 17:11
5	05:46 21:13	06:16 20:47	20:21 (22) 20:22 (22)	06:52 19:58	07:13 (27) 19:02	07:27 17:10
6	05:47 21:13	06:17 20:46		06:53 19:56	07:14 (27) 19:00	07:28 17:09
7	05:48 21:12	06:18 20:45		06:54 19:54	07:15 (27) 18:56	07:29 17:07
8	05:48 21:12	06:19 20:43		06:55 19:52	07:17 (27) 18:54	07:31 17:06
9	05:49 21:12	06:20 20:42		06:56 19:50	07:18 (27) 18:53	07:32 17:05
10	05:50 21:11	06:21 20:41		06:57 19:48	07:20 (27) 18:51	07:33 17:04
11	05:51 21:11	20:22 (22) 20:29 (22)	06:23 20:39	06:59 19:46	07:34 18:49	07:15 17:03
12	05:51 21:10	20:21 (22) 20:30 (22)	06:24 20:38	07:00 19:45	07:36 18:47	07:17 17:02
13	05:52 21:10	20:19 (22) 20:31 (22)	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01
14	05:53 21:09	20:18 (22) 20:32 (22)	06:26 20:35	07:02 19:41	07:38 18:44	07:19 16:59
15	05:54 21:08	20:18 (22) 20:33 (22)	06:27 20:33	07:03 19:39	07:39 18:42	07:21 16:58
16	05:55 21:08	20:17 (22) 20:34 (22)	06:28 20:32	07:04 19:37	07:41 18:40	07:22 16:57
17	05:56 21:07	20:17 (22) 20:35 (22)	06:30 20:30	07:06 19:35	07:42 18:39	07:23 16:57
18	05:57 21:06	20:17 (22) 20:36 (22)	06:31 20:28	07:07 19:33	07:43 18:37	07:25 16:56
19	05:58 21:06	20:16 (22) 20:37 (22)	06:32 20:27	07:08 19:32	07:45 18:35	07:26 16:55
20	05:59 21:05	20:16 (22) 20:37 (22)	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54
21	06:00 21:04	20:15 (22) 20:37 (22)	06:34 20:24	07:10 19:28	07:47 18:32	07:28 16:53
22	06:01 21:03	20:15 (22) 20:36 (22)	06:35 20:22	07:11 19:26	07:48 18:30	07:30 16:52
23	06:02 21:02	20:14 (22) 20:35 (22)	06:37 20:20	07:13 19:24	07:50 18:29	07:31 16:52
24	06:03 21:01	20:14 (22) 20:34 (22)	06:38 20:19	07:14 19:22	07:51 18:27	07:32 16:51
25	06:04 21:00	20:14 (22) 20:33 (22)	06:39 20:17	07:15 19:20	07:52 18:26	07:34 16:50
26	06:05 20:59	20:14 (22) 20:32 (22)	06:40 20:15	07:16 19:18	07:54 18:24	07:35 16:50
27	06:06 20:58	20:14 (22) 20:31 (22)	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49
28	06:07 20:57	20:14 (22) 20:30 (22)	06:42 20:12	07:19 19:15	07:56 18:21	07:37 16:49
29	06:08 20:56	20:15 (22) 20:29 (22)	06:44 20:10	07:20 19:13	07:58 18:20	07:38 16:48
30	06:09 20:55	20:15 (22) 20:28 (22)	06:45 20:08	07:21 19:11	07:59 18:18	07:40 16:48
31	06:10 20:54	20:16 (22) 20:28 (22)	06:46 20:06	07:22 (27) 07:23 (27)	19:11 18:17	16:54 16:55
Potential sun hours	471	435	377	341	289	276
Total, worst case	346	61	86			
Sun reduction	0.76	0.74	0.69			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.66	0.61	0.57			
Total reduction	0.49	0.44	0.38			
Total, real	169	27	33			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H287 - H287

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	08:26 (41)	07:44	07:04	07:07	06:17
	16:56	13	08:39 (41)	17:33	18:11	19:50
2	08:02	08:26 (41)	07:43	07:02	07:06	06:15
	16:57	14	08:40 (41)	17:35	18:12	19:52
3	08:02	08:26 (41)	07:42	07:00	07:04	06:14
	16:57	14	08:40 (41)	17:36	18:14	19:53
4	08:02	08:26 (41)	07:41	06:59	07:02	06:12
	16:58	15	08:41 (41)	17:38	18:15	19:54
5	08:02	08:26 (41)	07:40	06:57	07:00	19:22 (27)
	16:59	15	08:41 (41)	17:39	18:16	19:55
6	08:02	08:26 (41)	07:39	06:55	06:58	19:18 (27)
	17:00	16	08:42 (41)	17:41	18:18	19:57
7	08:01	08:25 (41)	07:37	06:53	06:57	19:16 (27)
	17:01	16	08:41 (41)	17:42	18:19	19:58
8	08:01	08:25 (41)	07:36	07:51	06:55	19:14 (27)
	17:03	17	08:42 (41)	17:43	18:20	19:59
9	08:01	08:25 (41)	07:35	07:50	06:53	19:12 (27)
	17:04	18	08:43 (41)	17:45	19:21	20:00
10	08:01	08:24 (41)	07:33	07:48	06:51	19:10 (27)
	17:05	18	08:42 (41)	17:46	19:23	20:02
11	08:00	08:24 (41)	07:32	07:46	06:49	19:10 (27)
	17:06	19	08:43 (41)	17:48	19:24	20:03
12	08:00	08:24 (41)	07:31	07:44	06:48	19:08 (27)
	17:07	18	08:42 (41)	17:49	19:25	20:04
13	08:00	08:25 (41)	07:29	07:42	06:46	19:07 (27)
	17:08	18	08:43 (41)	17:50	19:27	20:05
14	07:59	08:25 (41)	07:28	07:41	06:44	19:06 (27)
	17:09	17	08:42 (41)	17:52	19:28	20:07
15	07:59	08:27 (41)	07:26	07:39	06:42	19:07 (27)
	17:11	15	08:42 (41)	17:53	19:29	20:08
16	07:58	08:28 (41)	07:25	07:37	06:41	19:06 (27)
	17:12	13	08:41 (41)	17:55	19:30	20:09
17	07:57	08:29 (41)	07:23	07:35	06:39	19:05 (27)
	17:13	11	08:40 (41)	17:56	19:32	20:10
18	07:57	08:32 (41)	07:22	07:33	06:37	19:06 (27)
	17:14	7	08:39 (41)	17:57	19:33	20:11
19	07:56		07:20	07:31	06:36	19:05 (27)
	17:16		17:59	19:34	20:13	37
20	07:56		07:19	07:30	06:34	19:05 (27)
	17:17		18:00	19:36	20:14	37
21	07:55		07:17	07:28	06:32	19:06 (27)
	17:18		18:00	19:37	20:15	36
22	07:54		07:15	07:26	06:31	19:06 (27)
	17:20		18:01	19:38	20:16	34
23	07:53		07:14	07:24	06:29	19:06 (27)
	17:21		18:03	19:39	20:18	34
24	07:52		07:12	07:22	06:27	19:07 (27)
	17:22		18:04	19:41	20:19	32
25	07:52		07:10	07:20	06:26	19:07 (27)
	17:24		18:06	19:42	20:20	30
26	07:51		07:09	07:19	06:24	19:08 (27)
	17:25		18:07	19:43	20:21	29
27	07:50		07:07	07:17	06:23	19:09 (27)
	17:27		18:08	19:44	20:23	26
28	07:49		07:05	07:15	06:21	19:11 (27)
	17:28		18:10	19:46	20:24	23
29	07:48			07:13	06:20	19:13 (27)
	17:29			19:47	20:25	19
30	07:47			07:11	06:18	19:15 (27)
	17:31			19:48	20:26	14
31	07:46			07:09		
	17:32			19:49		
Potential sun hours	287	292	369	403	458	464
Total, worst case	274			762	6	
Sun reduction	0.57			0.61	0.65	
Oper. time red.	0.98			0.98	0.98	
Wind dir. red.	0.70			0.61	0.61	
Total reduction	0.39			0.37	0.39	
Total, real	107			281	2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H287 - H287

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:44 21:14	06:11 20:52	06:47 20:05	19:09 (27) 19:40 (27)	07:22 19:09	07:41 16:47	08:06 (41) 19 08:25 (41)
2	05:44 21:14	06:12 20:51	06:48 20:03	19:09 (27) 19:38 (27)	07:23 19:07	07:42 17:14	08:07 (41) 18 08:25 (41)
3	05:45 21:13	06:13 20:50	06:49 20:01	19:10 (27) 19:36 (27)	07:25 19:05	07:43 17:13	08:08 (41) 18 08:26 (41)
4	05:46 21:13	06:14 20:49	06:50 19:59	19:11 (27) 19:34 (27)	07:26 19:03	07:44 17:11	08:09 (41) 17 08:26 (41)
5	05:46 21:13	06:16 20:47	06:52 19:57	19:12 (27) 19:33 (27)	07:27 19:02	07:45 17:10	08:10 (41) 17 08:27 (41)
6	05:47 21:13	06:17 20:46	06:53 19:56	19:14 (27) 19:31 (27)	07:28 19:00	07:46 17:09	08:11 (41) 16 08:27 (41)
7	05:48 21:12	06:18 20:45	06:54 19:54	19:17 (27) 19:28 (27)	07:29 18:56	07:47 17:07	08:13 (41) 15 08:28 (41)
8	05:48 21:12	06:19 20:43	06:55 19:52	19:28 (27) 18:54	07:31 17:06	07:48 16:45	08:14 (41) 15 08:29 (41)
9	05:49 21:12	06:20 20:42	06:56 19:50	19:28 (27) 18:53	07:32 17:05	07:49 16:45	08:14 (41) 14 08:28 (41)
10	05:50 21:11	06:21 20:40	06:57 19:48	19:28 (27) 18:51	07:33 17:04	07:50 16:45	08:15 (41) 14 08:29 (41)
11	05:51 21:11	06:22 20:39	06:59 19:46	19:28 (27) 18:49	07:34 17:03	07:51 16:45	08:16 (41) 13 08:29 (41)
12	05:51 21:10	06:24 20:38	19:25 (27) 19:34 (27)	07:00 19:45	07:36 18:47	07:52 17:01	08:17 (41) 13 08:30 (41)
13	05:52 21:10	06:25 20:36	19:22 (27) 19:39 (27)	07:01 19:43	07:37 18:45	07:53 16:45	08:18 (41) 12 08:30 (41)
14	05:53 21:09	06:26 20:35	19:20 (27) 19:40 (27)	07:02 19:41	07:38 18:44	07:53 16:59	08:19 (41) 12 08:31 (41)
15	05:54 21:08	06:27 20:33	19:18 (27) 19:42 (27)	07:03 19:39	07:39 18:42	07:54 16:58	08:20 (41) 12 08:32 (41)
16	05:55 21:08	06:28 20:31	19:16 (27) 19:43 (27)	07:04 19:37	07:41 18:40	07:55 16:57	08:20 (41) 11 08:31 (41)
17	05:56 21:07	06:29 20:30	19:15 (27) 19:44 (27)	07:06 19:35	07:42 18:39	07:56 16:56	08:21 (41) 11 08:32 (41)
18	05:57 21:06	06:31 20:28	19:13 (27) 19:44 (27)	07:07 19:33	07:43 18:37	07:56 16:55	08:22 (41) 11 08:33 (41)
19	05:58 21:05	06:32 20:27	19:12 (27) 19:45 (27)	07:08 19:31	07:44 18:35	07:57 16:55	08:22 (41) 11 08:33 (41)
20	05:59 21:05	06:33 20:25	19:11 (27) 19:45 (27)	07:09 19:30	07:46 18:34	07:57 16:54	08:23 (41) 11 08:34 (41)
21	06:00 21:04	06:34 20:23	19:10 (27) 19:45 (27)	07:10 19:28	07:47 18:32	07:58 16:53	08:23 (41) 11 08:34 (41)
22	06:01 21:03	06:35 20:22	19:10 (27) 19:46 (27)	07:11 19:26	07:48 18:30	07:59 16:52	08:24 (41) 11 08:35 (41)
23	06:02 21:02	06:36 20:20	19:10 (27) 19:46 (27)	07:13 19:24	07:50 18:29	07:59 16:51	08:24 (41) 11 08:35 (41)
24	06:03 21:01	06:38 20:19	19:09 (27) 19:46 (27)	07:14 19:22	07:51 18:27	08:00 16:51	08:25 (41) 11 08:36 (41)
25	06:04 21:00	06:39 20:17	19:08 (27) 19:46 (27)	07:15 19:20	07:52 18:26	08:00 16:50	08:25 (41) 11 08:36 (41)
26	06:05 20:59	06:40 20:15	19:08 (27) 19:46 (27)	07:16 19:18	07:54 18:24	08:00 16:50	08:25 (41) 11 08:36 (41)
27	06:06 20:58	06:41 20:13	19:08 (27) 19:45 (27)	07:17 19:16	07:55 18:23	08:00 16:49	08:25 (41) 11 08:36 (41)
28	06:07 20:57	06:42 20:12	19:07 (27) 19:44 (27)	07:18 19:15	07:56 18:21	08:00 16:48	08:26 (41) 12 08:38 (41)
29	06:08 20:56	06:43 20:10	19:07 (27) 19:44 (27)	07:20 19:13	07:58 18:20	08:00 16:48	08:26 (41) 12 08:38 (41)
30	06:09 20:55	06:45 20:08	19:07 (27) 19:43 (27)	07:21 19:11	07:59 18:18	08:00 16:47	08:26 (41) 12 08:38 (41)
31	06:10 20:54	06:46 20:06	19:08 (27) 19:42 (27)	07:21 19:11	08:00 18:17	08:01 16:55	08:26 (41) 13 08:39 (41)
Potential sun hours	471	435	377	341	289	276	406
Total, worst case		625	158		99		0.49
Sun reduction		0.74	0.69		0.50		0.98
Oper. time red.		0.98	0.98		0.98		0.70
Wind dir. red.		0.61	0.61		0.70		0.34
Total reduction		0.45	0.42		0.34		137
Total, real		280	66		34		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H288 - H288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:02	08:26 (28)	07:45	07:04	07:08	18:21 (26)	06:17	05:44		
	16:56	23 08:49 (28)	17:33	18:11	19:51	46 19:07 (26)	20:28	21:01		
2	08:02	08:26 (28)	07:43	07:02	07:06	18:21 (26)	06:15	05:43		
	16:57	23 08:49 (28)	17:35	18:12	19:52	44 19:05 (26)	20:29	21:02		
3	08:02	08:26 (28)	07:42	07:00	07:04	18:22 (26)	06:14	05:43		
	16:57	23 08:49 (28)	17:36	18:14	19:53	42 19:04 (26)	20:30	21:03		
4	08:02	08:26 (28)	07:41	06:59	07:02	18:23 (26)	06:12	05:42		
	16:58	24 08:50 (28)	17:38	18:15	19:54	39 19:02 (26)	20:31	21:04		
5	08:02	08:26 (28)	07:40	06:57	07:00	18:24 (26)	06:11	05:42		
	16:59	24 08:50 (28)	17:39	18:16	19:55	36 19:00 (26)	20:32	21:05		
6	08:02	08:26 (28)	07:39	06:55	06:58	18:25 (26)	06:10	05:42		
	17:00	25 08:51 (28)	17:41	18:18	19:57	33 18:58 (26)	20:34	21:05		
7	08:01	08:25 (28)	07:37	06:53	06:57	18:27 (26)	06:08	05:41		
	17:01	26 08:51 (28)	17:42	18:19	19:58	30 18:57 (26)	20:35	21:06		
8	08:01	08:26 (28)	07:36	07:52	18:42 (26)	06:55	18:29 (26)	06:07	06:28 (19)	05:41
	17:03	25 08:51 (28)	17:43	18:20	16 18:58 (26)	19:59	25 18:54 (26)	20:36	9 06:37 (19)	21:07
9	08:01	08:26 (28)	07:35	07:50	18:38 (26)	06:53	18:32 (26)	06:06	06:27 (19)	05:41
	17:04	26 08:52 (28)	17:45	19:21	22 19:00 (26)	20:00	18 18:50 (26)	20:37	11 06:38 (19)	21:08
10	08:01	08:26 (28)	07:33	07:48	18:35 (26)	06:51	18:37 (26)	06:04	06:26 (19)	05:40
	17:05	25 08:51 (28)	17:46	19:23	26 19:01 (26)	20:02	7 18:44 (26)	20:38	13 06:39 (19)	21:08
11	08:00	08:28 (28)	07:32	07:46	18:32 (26)	06:49		06:03	06:25 (19)	05:40
	17:06	24 08:52 (28)	17:48	19:24	30 19:02 (26)	20:03		20:40	14 06:39 (19)	21:09
12	08:00	08:28 (28)	07:31	07:44	18:31 (26)	06:48		06:02	06:24 (19)	05:40
	17:07	23 08:51 (28)	17:49	19:25	33 19:04 (26)	20:04		20:41	16 06:40 (19)	21:09
13	08:00	08:29 (28)	07:29	07:43	18:29 (26)	06:46		06:01	06:23 (19)	05:40
	17:08	23 08:52 (28)	17:50	19:27	37 19:06 (26)	20:05		20:42	17 06:40 (19)	21:10
14	07:59	08:29 (28)	07:28	07:41	18:27 (26)	06:44		06:00	06:21 (19)	05:40
	17:09	22 08:51 (28)	17:52	19:28	40 19:07 (26)	20:07		20:43	18 06:39 (19)	21:10
15	07:59	08:31 (28)	07:26	07:39	18:26 (26)	06:42		05:58	06:20 (19)	05:40
	17:11	20 08:51 (28)	17:53	19:29	42 19:08 (26)	20:08		20:44	19 06:39 (19)	21:11
16	07:58	08:32 (28)	07:25	07:37	18:24 (26)	06:41		05:57	06:19 (19)	05:40
	17:12	19 08:51 (28)	17:55	19:30	45 19:09 (26)	20:09		20:45	20 06:39 (19)	21:11
17	07:58	08:34 (28)	07:23	07:35	18:23 (26)	06:39		05:56	06:18 (19)	05:40
	17:13	17 08:51 (28)	17:56	19:32	47 19:10 (26)	20:10		20:46	21 06:39 (19)	21:12
18	07:57	08:35 (28)	07:22	07:33	18:23 (26)	06:37		05:55	06:17 (19)	05:40
	17:14	15 08:50 (28)	17:57	19:33	49 19:12 (26)	20:12		20:47	22 06:39 (19)	21:12
19	07:56	08:36 (28)	07:20	07:32	18:22 (26)	06:36		05:54	06:16 (19)	05:40
	17:16	12 08:48 (28)	17:59	19:34	50 19:12 (26)	20:13		20:49	23 06:39 (19)	21:13
20	07:56	08:39 (28)	07:19	07:30	18:21 (26)	06:34		05:53	06:16 (19)	05:40
	17:17	7 08:46 (28)	18:00	19:36	51 19:12 (26)	20:14		20:50	23 06:39 (19)	21:13
21	07:55		07:17	07:28	18:20 (26)	06:32		05:52	06:15 (19)	05:40
	17:18		18:00	19:37	52 19:12 (26)	20:15		20:51	24 06:39 (19)	21:13
22	07:54		07:15	07:26	18:20 (26)	06:31		05:51	06:15 (19)	05:40
	17:20		18:01	19:38	52 19:12 (26)	20:16		20:52	23 06:38 (19)	21:13
23	07:53		07:14	07:24	18:19 (26)	06:29		05:50	06:16 (19)	05:41
	17:21		18:03	19:39	53 19:12 (26)	20:18		20:53	22 06:38 (19)	21:14
24	07:52		07:12	07:22	18:19 (26)	06:27		05:50	06:16 (19)	05:41
	17:22		18:04	19:41	52 19:11 (26)	20:19		20:54	21 06:37 (19)	21:14
25	07:52		07:10	07:20	18:19 (26)	06:26		05:49	06:17 (19)	05:41
	17:24		18:06	19:42	53 19:12 (26)	20:20		20:55	19 06:36 (19)	21:14
26	07:51		07:09	07:19	18:19 (26)	06:24		05:48	06:18 (19)	05:42
	17:25		18:07	19:43	52 19:11 (26)	20:21		20:56	18 06:36 (19)	21:14
27	07:50		07:07	07:17	18:19 (26)	06:23		05:47	06:19 (19)	05:42
	17:27		18:08	19:44	52 19:11 (26)	20:23		20:57	16 06:35 (19)	21:14
28	07:49		07:05	07:15	18:19 (26)	06:21		05:46	06:20 (19)	05:42
	17:28		18:10	19:46	51 19:10 (26)	20:24		20:58	14 06:34 (19)	21:14
29	07:48			07:13	18:19 (26)	06:20		05:46	06:21 (19)	05:43
	17:29			19:47	50 19:09 (26)	20:25		20:59	13 06:34 (19)	21:14
30	07:47			07:11	18:19 (26)	06:18		05:45	06:22 (19)	05:43
	17:31			19:48	49 19:08 (26)	20:26		21:00	10 06:32 (19)	21:14
31	07:46			07:09	18:19 (26)			05:45	06:25 (19)	
	17:32			19:49	48 19:07 (26)			21:01	6 06:31 (19)	
Potential sun hours	287		292	369	403	320	424	458		464
Total, worst case		426		1052		320	424			
Sun reduction		0.57		0.59		0.61	0.65			
Oper. time red.		0.98		0.98		0.98	0.98			
Wind dir. red.		0.70		0.56		0.56	0.55			
Total reduction		0.39		0.33		0.34	0.36			
Total, real		168		346		109	151			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H288 - H288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December				
1	05:44	06:11	06:35 (19)	06:47	07:22	18:09 (26)	07:02	07:41	08:10 (28)	
	21:14	20:52	15 06:50 (19)	20:05	19:09	35 18:44 (26)	17:15	16:47	24 08:34 (28)	
2	05:44	06:12	06:36 (19)	06:48	18:36 (26)	07:23	18:10 (26)	07:03	08:10 (28)	
	21:14	20:51	14 06:50 (19)	20:03	7 18:43 (26)	19:07	32 18:42 (26)	17:14	16:47	24 08:34 (28)
3	05:45	06:13	06:37 (19)	06:49	18:30 (26)	07:25	18:12 (26)	07:04	07:43	08:10 (28)
	21:14	20:50	12 06:49 (19)	20:01	18 18:48 (26)	19:05	29 18:41 (26)	17:13	16:46	25 08:35 (28)
4	05:46	06:14	06:38 (19)	06:50	18:26 (26)	07:26	18:14 (26)	07:06	07:44	08:10 (28)
	21:13	20:49	10 06:48 (19)	19:59	25 18:51 (26)	19:03	24 18:38 (26)	17:11	16:46	25 08:35 (28)
5	05:46	06:16	06:39 (19)	06:52	18:23 (26)	07:27	18:17 (26)	07:07	07:45	08:10 (28)
	21:13	20:47	8 06:47 (19)	19:57	30 18:53 (26)	19:02	19 18:36 (26)	17:10	16:46	26 08:36 (28)
6	05:47	06:17	06:40 (19)	06:53	18:21 (26)	07:28	18:22 (26)	07:08	07:46	08:12 (28)
	21:13	20:46	6 06:46 (19)	19:56	33 18:54 (26)	19:00	8 18:30 (26)	17:09	16:46	25 08:37 (28)
7	05:48	06:18	06:41 (19)	06:54	18:19 (26)	07:29	07:10	07:47	08:13 (28)	
	21:12	20:45	3 06:44 (19)	19:54	36 18:55 (26)	18:56	17:07	16:45	25 08:38 (28)	
8	05:48	06:19	06:55	07:31	18:18 (26)	07:31	07:11	07:48	08:14 (28)	
	21:12	20:43	19:52	39 18:57 (26)	18:54	17:06	16:45	24 08:38 (28)		
9	05:49	06:20	06:56	07:32	18:16 (26)	07:32	07:13	07:49	08:15 (28)	
	21:12	20:42	19:50	42 18:58 (26)	18:53	17:05	16:45	24 08:39 (28)		
10	05:50	06:21	06:57	07:33	18:14 (26)	07:33	07:14	07:50	08:16 (28)	
	21:11	20:41	19:48	44 18:58 (26)	18:51	17:04	16:45	23 08:39 (28)		
11	05:51	06:22	06:59	07:34	18:13 (26)	07:34	07:15	07:51	08:16 (28)	
	21:11	20:39	19:46	46 18:59 (26)	18:49	17:03	16:45	23 08:39 (28)		
12	05:51	06:35 (19)	06:24	07:00	18:12 (26)	07:36	07:17	07:52	08:17 (28)	
	21:10	2 06:37 (19)	20:38	19:45	47 18:59 (26)	18:47	17:01	16:45	22 08:39 (28)	
13	05:52	06:32 (19)	06:25	07:01	18:10 (26)	07:37	07:18	07:53	08:18 (28)	
	21:10	8 06:40 (19)	20:36	19:43	49 18:59 (26)	18:45	17:00	16:45	22 08:40 (28)	
14	05:53	06:30 (19)	06:26	07:02	18:09 (26)	07:38	07:19	07:53	08:19 (28)	
	21:09	12 06:42 (19)	20:35	19:41	50 18:59 (26)	18:44	16:59	16:46	21 08:40 (28)	
15	05:54	06:29 (19)	06:27	07:03	18:08 (26)	07:39	07:21	07:54	08:20 (28)	
	21:08	14 06:43 (19)	20:33	19:39	51 18:59 (26)	18:42	16:58	16:46	21 08:41 (28)	
16	05:55	06:29 (19)	06:28	07:04	18:08 (26)	07:41	07:22	07:55	08:20 (28)	
	21:08	15 06:44 (19)	20:32	19:37	52 19:00 (26)	18:40	16:57	16:46	21 08:41 (28)	
17	05:56	06:28 (19)	06:29	07:06	18:07 (26)	07:42	07:23	07:56	08:21 (28)	
	21:07	17 06:45 (19)	20:30	19:35	53 19:00 (26)	18:39	16:56	16:46	21 08:42 (28)	
18	05:57	06:28 (19)	06:31	07:07	18:07 (26)	07:43	07:25	07:56	08:22 (28)	
	21:06	18 06:46 (19)	20:28	19:33	52 18:59 (26)	18:37	16:55	16:47	20 08:42 (28)	
19	05:58	06:27 (19)	06:32	07:08	18:06 (26)	07:45	07:26	07:57	08:22 (28)	
	21:05	20 06:47 (19)	20:27	19:31	53 18:59 (26)	18:35	16:55	16:47	20 08:42 (28)	
20	05:59	06:26 (19)	06:33	07:09	18:06 (26)	07:46	07:27	07:58	08:23 (28)	
	21:05	21 06:47 (19)	20:25	19:30	52 18:58 (26)	18:34	16:54	16:47	20 08:43 (28)	
21	06:00	06:25 (19)	06:34	07:10	18:05 (26)	07:47	07:28	07:58	08:23 (28)	
	21:04	23 06:48 (19)	20:24	19:28	53 18:58 (26)	18:32	16:53	16:48	20 08:43 (28)	
22	06:01	06:25 (19)	06:35	07:11	18:05 (26)	07:48	07:30	07:59	08:24 (28)	
	21:03	23 06:48 (19)	20:22	19:26	52 18:57 (26)	18:30	16:52	7 08:22 (28)	16:48	20 08:44 (28)
23	06:02	06:25 (19)	06:36	07:13	18:05 (26)	07:50	07:31	08:13 (28)	07:59	08:24 (28)
	21:02	24 06:49 (19)	20:20	19:24	52 18:57 (26)	18:29	16:51	12 08:25 (28)	16:49	20 08:44 (28)
24	06:03	06:26 (19)	06:38	07:14	18:05 (26)	07:51	07:32	08:12 (28)	08:00	08:25 (28)
	21:01	23 06:49 (19)	20:19	19:22	51 18:56 (26)	18:27	16:51	15 08:27 (28)	16:49	20 08:45 (28)
25	06:04	06:27 (19)	06:39	07:15	18:05 (26)	07:52	07:34	08:11 (28)	08:00	08:25 (28)
	21:00	22 06:49 (19)	20:17	19:20	50 18:55 (26)	18:26	16:50	17 08:28 (28)	16:50	20 08:45 (28)
26	06:05	06:28 (19)	06:40	07:16	18:05 (26)	07:54	07:35	08:11 (28)	08:00	08:25 (28)
	20:59	22 06:50 (19)	20:15	19:18	48 18:53 (26)	18:24	16:50	19 08:30 (28)	16:51	21 08:46 (28)
27	06:06	06:29 (19)	06:41	07:17	18:06 (26)	07:55	07:36	08:10 (28)	08:01	08:26 (28)
	20:58	21 06:50 (19)	20:13	19:16	45 18:51 (26)	18:23	16:49	20 08:30 (28)	16:51	21 08:47 (28)
28	06:07	06:30 (19)	06:42	07:19	18:07 (26)	07:56	07:37	08:10 (28)	08:01	08:26 (28)
	20:57	20 06:50 (19)	20:12	19:15	43 18:50 (26)	18:21	16:48	21 08:31 (28)	16:52	21 08:47 (28)
29	06:08	06:31 (19)	06:43	07:20	18:07 (26)	07:58	07:38	08:10 (28)	08:01	08:26 (28)
	20:56	19 06:50 (19)	20:10	19:13	41 18:48 (26)	18:20	16:48	23 08:33 (28)	16:53	21 08:47 (28)
30	06:09	06:32 (19)	06:45	07:21	18:08 (26)	07:59	07:40	08:10 (28)	08:01	08:26 (28)
	20:55	18 06:50 (19)	20:08	19:11	38 18:46 (26)	18:18	16:47	23 08:33 (28)	16:54	22 08:48 (28)
31	06:10	06:33 (19)	06:46	08:00	18:17			08:02	08:26 (28)	
	20:54	16 06:49 (19)	20:06	18:17				16:55	22 08:48 (28)	
Potential sun hours	471	435	377	341	289	276				
Total, worst case	358	68	1252	147	157	684				
Sun reduction	0.76	0.74	0.69	0.63	0.50	0.49				
Oper. time red.	0.98	0.98	0.98	0.98	0.98	0.98				
Wind dir. red.	0.55	0.55	0.56	0.56	0.70	0.70				
Total reduction	0.42	0.41	0.38	0.35	0.35	0.34				
Total, real	149	28	481	52	54	231				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H289 - H289

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June								
1	08:02	07:44	16:42 (39)	07:04	07:24 (30)	07:07	06:17	06:38 (32)	05:44					
	16:56	17:33	20	17:02 (39)	18:11	26	07:50 (30)	19:50	20:27	28	07:06 (31)	21:01		
2	08:02	07:43	16:43 (39)	07:02	07:23 (30)	07:06	06:15	06:36 (32)	05:43					
	16:56	17:35	19	17:02 (39)	18:12	29	07:52 (30)	19:52	20:29	32	20:05 (28)	21:02		
3	08:02	07:42	16:44 (39)	07:00	07:21 (30)	07:04	06:14	06:35 (32)	05:43					
	16:57	17:36	17	17:01 (39)	18:14	31	07:52 (30)	19:53	20:30	35	20:06 (28)	21:03		
4	08:02	07:41	16:46 (39)	06:58	07:19 (30)	07:02	06:12	06:33 (32)	05:42					
	16:58	17:38	14	17:00 (39)	18:15	34	07:53 (30)	19:54	20:31	39	20:07 (28)	21:04		
5	08:02	07:40	16:48 (39)	06:57	07:17 (30)	07:00	06:11	06:34 (32)	05:42					
	16:59	17:39	10	16:58 (39)	18:16	36	07:53 (30)	19:55	20:32	39	20:08 (28)	21:05		
6	08:01	07:38		06:55	07:15 (30)	06:58	06:10	06:35 (32)	05:42					
	17:00	17:40		18:17	38	07:53 (30)	19:57	20:33	40	20:10 (28)	21:05			
7	08:01	07:37		06:53	07:14 (30)	06:57	06:08	06:37 (32)	05:41					
	17:01	17:42		18:19	41	07:55 (30)	19:58	20:35	39	20:11 (28)	21:06			
8	08:01	07:36		07:51	08:12 (30)	06:55	06:07	06:38 (31)	05:41					
	17:02	17:43		18:20	42	08:54 (30)	19:59	20:36	39	20:12 (28)	21:07			
9	08:01	07:35		07:50	08:11 (30)	06:53	06:06	06:39 (31)	05:41					
	17:04	17:45		19:21	43	08:54 (30)	20:00	20:37	38	20:13 (28)	21:07			
10	08:01	07:33		07:48	08:10 (30)	06:51	06:04	06:40 (31)	05:40					
	17:05	17:46		19:23	44	08:54 (30)	20:02	20:38	37	20:14 (28)	21:08			
11	08:00	07:32		07:46	08:10 (30)	06:49	06:03	06:42 (31)	05:40					
	17:06	17:48		19:24	44	08:54 (30)	20:03	20:39	34	20:15 (28)	21:09			
12	08:00	07:30		07:44	08:10 (30)	06:48	06:02	06:44 (31)	05:40					
	17:07	17:49		19:25	44	08:54 (30)	20:04	20:41	32	20:17 (28)	21:09			
13	07:59	07:29		07:42	08:10 (30)	06:46	06:01	06:47 (31)	05:40					
	17:08	17:50		19:27	43	08:53 (30)	20:05	20:42	24	20:17 (28)	21:10			
14	07:59	07:28		07:41	08:10 (30)	06:44	05:59	19:56 (28)	05:40					
	17:09	17:52		19:28	42	08:52 (30)	20:06	20:43	22	20:18 (28)	21:10			
15	07:59	07:26		07:39	08:10 (30)	06:42	05:58	19:56 (28)	05:40					
	17:11	17:53		19:29	42	08:52 (30)	20:08	20:44	23	20:19 (28)	21:11			
16	07:58	16:43 (39)	07:25	07:37	08:10 (30)	06:41	05:57	19:57 (28)	05:40					
	17:12	16:44 (39)	17:54	19:30	40	08:50 (30)	20:09	20:45	21	20:18 (28)	21:11			
17	07:57	16:41 (39)	07:23	07:35	08:11 (30)	06:39	05:56	19:57 (28)	05:40					
	17:13	4	16:45 (39)	17:56	19:32	38	08:49 (30)	20:10	20:46	21	20:18 (28)	21:12		
18	07:57	16:41 (39)	07:22	07:33	08:11 (30)	06:37	05:55	19:58 (28)	05:40					
	17:14	6	16:47 (39)	17:57	19:33	37	08:48 (30)	20:11	20:47	19	20:17 (28)	21:12		
19	07:56	16:41 (39)	07:20	07:31	08:13 (30)	06:36	05:54	19:59 (28)	05:40					
	17:16	8	16:49 (39)	17:59	19:34	34	08:47 (30)	20:13	20:48	17	20:16 (28)	21:12		
20	07:55	16:40 (39)	07:18	07:30	08:13 (30)	06:34		06:54 (31)	05:53		20:00 (28)	05:40		
	17:17	10	16:50 (39)	18:00	19:35	33	08:46 (30)	20:14	4	06:58 (31)	20:50	15	20:15 (28)	21:13
21	07:55	16:39 (39)	07:17	07:28	08:15 (30)	06:32		06:53 (31)	05:52		20:02 (28)	05:40		
	17:18	12	16:51 (39)	18:00	19:37	28	08:43 (30)	20:15	8	07:01 (31)	20:51	13	20:15 (28)	21:13
22	07:54	16:40 (39)	07:15	07:26	08:16 (30)	06:31		06:51 (31)	05:51		20:04 (28)	05:40		
	17:20	13	16:53 (39)	18:01	19:38	25	08:41 (30)	20:16	11	07:02 (31)	20:52	9	20:13 (28)	21:13
23	07:53	16:40 (39)	07:14	07:24	08:18 (30)	06:29		06:50 (31)	05:50		20:06 (28)	05:41		
	17:21	15	16:55 (39)	18:03	19:39	20	08:38 (30)	20:18	14	07:04 (31)	20:53	4	20:10 (28)	21:13
24	07:52	16:40 (39)	07:12	07:22	08:21 (30)	06:27		06:48 (32)	05:49				05:41	
	17:22	16	16:56 (39)	18:04	19:40	13	08:34 (30)	20:19	16	07:04 (31)	20:54		21:14	
25	07:51	16:39 (39)	07:10		07:31 (30)	07:20		06:26	06:46 (32)	05:49			05:41	
	17:24	18	16:57 (39)	18:05	9	07:40 (30)	19:42	20:20	18	07:04 (31)	20:55		21:14	
26	07:51	16:40 (39)	07:09		07:29 (30)	07:18		06:24	06:45 (32)	05:48			05:42	
	17:25	19	16:59 (39)	18:07	15	07:44 (30)	19:43	20:21	20	07:05 (31)	20:56		21:14	
27	07:50	16:40 (39)	07:07		07:28 (30)	07:17		06:23	06:43 (32)	05:47			05:42	
	17:26	20	17:00 (39)	18:08	19	07:47 (30)	19:44	20:22	22	07:05 (31)	20:57		21:14	
28	07:49	16:40 (39)	07:05		07:26 (30)	07:15		06:21	06:42 (32)	05:46			05:42	
	17:28	22	17:02 (39)	18:10	23	07:49 (30)	19:45	20:24	24	07:06 (31)	20:58		21:14	
29	07:48	16:41 (39)			07:13			06:20	06:40 (32)	05:46			05:43	
	17:29	22	17:03 (39)		19:47			20:25	25	07:05 (31)	20:59		21:14	
30	07:47	16:41 (39)			07:11			06:18	06:39 (32)	05:45			05:43	
	17:31	23	17:04 (39)		19:48			20:26	26	07:05 (31)	21:00		21:14	
31	07:46	16:41 (39)			07:09			05:44						
	17:32	22	17:03 (39)		19:49			21:00						
Potential sun hours	287	292		369		403		458		464				
Total, worst case	231	146		847		188		620						
Sun reduction	0.57	0.59		0.59		0.61		0.65						
Oper. time red.	0.98	0.98		0.98		0.98		0.98						
Wind dir. red.	0.56	0.59		0.62		0.54		0.60						
Total reduction	0.31	0.34		0.36		0.32		0.38						
Total, real	72	50		304		61		235						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H289 - H289

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:11	06:53 (31)	06:47	07:22	07:49 (30)	07:02	07:41
	21:14	20:52	20:26 (28)	20:05	19:09	44 08:33 (30)	17:15	16:47
2	05:44	06:12	06:51 (31)	06:48	07:23	07:48 (30)	07:03	07:42
	21:14	20:51	20:25 (28)	20:03	19:07	44 08:32 (30)	17:14	16:47
3	05:45	06:13	06:50 (31)	06:49	07:24	07:48 (30)	07:04	07:43
	21:13	20:50	20:24 (28)	20:01	19:05	44 08:32 (30)	17:12	16:46
4	05:46	06:14	06:49 (31)	06:50	07:26	07:48 (30)	07:06	07:44
	21:13	20:49	20:23 (28)	19:59	19:03	44 08:32 (30)	17:11	16:46
5	05:46	06:16	06:48 (31)	06:51	07:27	07:48 (30)	07:07	07:45
	21:13	20:47	20:22 (28)	19:57	19:02	43 08:31 (30)	17:10	16:46
6	05:47	06:17	06:46 (32)	06:53	07:28	07:49 (30)	07:08	07:46
	21:13	20:46	20:20 (28)	19:56	19:00	41 08:30 (30)	17:09	16:46
7	05:47	06:18	06:44 (32)	06:54	07:29	07:50 (30)	07:10	07:47
	21:12	20:45	20:19 (28)	19:54	18:56	40 08:30 (30)	17:07	16:45
8	05:48	06:19	06:43 (32)	06:55	07:31	07:52 (30)	07:11	07:48
	21:12	20:43	20:18 (28)	19:52	18:54	37 08:29 (30)	17:06	16:45
9	05:49	06:20	06:43 (32)	06:56	07:32	07:53 (30)	07:12	07:49
	21:11	20:42	20:16 (28)	19:50	18:52	35 08:28 (30)	17:05	16:45
10	05:50	06:21	06:44 (32)	06:57	07:33	07:54 (30)	07:14	07:50
	21:11	20:40	20:15 (28)	19:48	18:51	33 08:27 (30)	17:04	16:45
11	05:50	06:22	06:45 (32)	06:58	07:34	07:56 (30)	07:15	07:51
	21:11	20:39	20:13 (28)	19:46	18:49	30 08:26 (30)	17:03	16:45
12	05:51	06:24	06:46 (32)	07:00	07:36	07:57 (30)	07:16	07:52
	21:10	20:37	20:11 (28)	19:44	18:47	27 08:24 (30)	17:01	16:45
13	05:52	06:25	06:47 (32)	07:01	07:37	07:58 (30)	07:18	07:53
	21:09	20:36	20:10 (28)	19:43	18:45	24 08:22 (30)	17:00	16:45
14	05:53	06:26	06:49 (32)	07:02	07:38	07:59 (30)	07:19	07:53
	21:09	20:34	20:08 (28)	19:41	18:44	21 08:20 (30)	16:59	16:46
15	05:54	06:27	06:50 (32)	07:03	07:39	08:01 (30)	07:20	07:54
	21:08	20:33	20:07 (28)	19:39	18:42	17 08:18 (30)	16:58	16:46
16	05:55	06:28	06:51 (32)	07:04	07:41	08:02 (30)	07:22	07:55
	21:08	20:31	20:06 (28)	19:37	18:40	13 08:15 (30)	16:57	16:46
17	05:56	06:29	06:52 (32)	07:05	07:42	08:04 (30)	07:23	07:56
	21:07	20:30	20:05 (28)	19:35	18:39	5 08:09 (30)	16:56	16:46
18	05:57	06:31	06:53 (32)	07:07	07:43	08:11 (30)	07:24	07:56
	21:06	20:28	20:03 (28)	19:33	18:37	16:55	16:30 (39)	16:47
19	05:58	06:32	06:54 (32)	07:08	07:44	08:12 (30)	07:26	07:57
	21:05	20:27	20:02 (28)	19:31	10 08:20 (30)	18:35	16:14 (39)	16:47
20	05:58	06:33	06:55 (31)	07:09	07:46	08:05 (30)	07:27	07:57
	21:05	20:25	20:01 (28)	19:29	19 08:24 (30)	18:34	16:54	16:47
21	05:59	20:14 (28)	06:34	07:10	08:02 (30)	07:47	07:28	07:58
	21:04	7 20:21 (28)	20:23	11 07:07 (31)	19:28	24 08:26 (30)	18:32	16:53
22	06:00	20:12 (28)	06:35	07:11	07:50 (30)	07:48	07:30	16:16 (39)
	21:03	11 20:23 (28)	20:22	8 07:05 (31)	19:26	28 08:27 (30)	18:30	16:52
23	06:01	20:11 (28)	06:36	07:12	07:51 (30)	07:50	07:31	16:18 (39)
	21:02	14 20:25 (28)	20:20	4 07:03 (31)	19:24	32 08:30 (30)	18:29	16:51
24	06:02	20:10 (28)	06:38	07:14	07:56 (30)	07:51	07:32	16:18 (39)
	21:01	16 20:26 (28)	20:18	19:22	34 08:30 (30)	18:27	16:51	6 16:24 (39)
25	06:03	20:09 (28)	06:39	07:15	07:55 (30)	07:52	07:33	16:19 (39)
	21:00	18 20:27 (28)	20:17	19:20	36 08:31 (30)	18:26	16:50	4 16:23 (39)
26	06:05	20:08 (28)	06:40	07:16	07:53 (30)	07:54	07:35	16:22 (39)
	20:59	20 20:28 (28)	20:15	19:18	39 08:32 (30)	18:24	16:49	1 16:23 (39)
27	06:06	20:08 (28)	06:41	07:17	07:52 (30)	07:55	07:36	08:01
	20:58	20 20:28 (28)	20:13	19:16	40 08:32 (30)	18:22	16:49	16:51
28	06:07	20:07 (28)	06:42	07:18	07:51 (30)	07:56	07:37	08:01
	20:57	22 20:29 (28)	20:12	19:14	41 08:32 (30)	18:21	16:48	16:52
29	06:08	20:07 (28)	06:43	07:20	07:51 (30)	07:58	07:38	08:01
	20:56	22 20:29 (28)	20:10	19:13	42 08:33 (30)	18:20	16:48	16:53
30	06:09	20:06 (28)	06:45	07:21	07:50 (30)	07:59	07:39	08:01
	20:55	22 20:28 (28)	20:08	19:11	43 08:33 (30)	18:18	16:47	16:54
31	06:10	06:56 (31)	06:46	07:22	08:00			08:01
	20:53	28 20:27 (28)	20:06	19:10	18:17			16:54
Potential sun hours	471	435	377	341	289	276		
Total, worst case	200	617	388	542	315			
Sun reduction	0.76	0.74	0.69	0.63	0.50			
Oper. time red.	0.98	0.98	0.98	0.98	0.98			
Wind dir. red.	0.64	0.56	0.62	0.62	0.56			
Total reduction	0.48	0.41	0.42	0.38	0.27			
Total, real	95	252	163	208	86			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H292 - H292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:01 16:55	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	19:38 (31) 20:04 (31)	05:44 21:01
2	08:02 16:56	07:43 17:35	07:02 18:12	07:05 19:52	06:15 20:29	19:37 (31) 20:05 (31)	05:43 21:02
3	08:02 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	19:38 (31) 20:06 (31)	05:43 21:03
4	08:02 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	19:38 (31) 20:04 (31)	05:42 21:04
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	19:39 (31) 20:04 (31)	05:42 21:04
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:57	06:09 20:33	19:40 (31) 20:03 (31)	05:41 21:05
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:35	19:40 (31) 20:02 (31)	05:41 21:06
8	08:01 17:02	07:36 17:43	06:51 18:20	06:55 19:59	06:07 20:36	19:41 (31) 20:01 (31)	05:41 21:07
9	08:01 17:04	07:34 17:45	06:50 19:21	06:53 20:00	06:06 20:37	19:43 (31) 19:59 (31)	05:40 21:07
10	08:00 17:05	07:33 17:46	07:48 19:23	19:00 (30) 19:01 (30)	06:51 20:01	19:45 (31) 19:58 (31)	05:40 21:08
11	08:00 17:06	07:32 17:47	07:46 19:24	18:58 (30) 19:02 (30)	06:49 20:03	19:48 (31) 19:55 (31)	05:40 21:09
12	08:00 17:07	07:30 17:49	07:44 19:25	18:56 (30) 19:03 (30)	06:48 20:04	06:02 20:40	05:40 21:09
13	07:59 17:08	07:29 17:50	07:42 19:26	18:56 (30) 19:06 (30)	06:46 20:05	06:01 20:42	05:40 21:10
14	07:59 17:09	07:27 17:52	07:40 19:28	18:55 (30) 19:07 (30)	06:44 20:06	05:59 20:43	05:40 21:10
15	07:58 17:11	07:26 17:53	07:39 19:29	18:55 (30) 19:08 (30)	06:42 20:08	05:58 20:44	05:40 21:11
16	07:58 17:12	07:25 17:54	07:37 19:30	18:54 (30) 19:09 (30)	06:41 20:09	05:57 20:45	05:40 21:11
17	07:57 17:13	07:23 17:56	07:35 19:32	18:54 (30) 19:10 (30)	06:39 20:10	05:56 20:46	05:40 21:12
18	07:57 17:14	07:21 17:57	07:33 19:33	18:54 (30) 19:11 (30)	06:37 20:11	05:55 20:47	05:40 21:12
19	07:56 17:16	07:20 17:59	07:31 19:34	18:54 (30) 19:12 (30)	06:35 20:13	19:49 (31) 19:50 (31)	05:54 21:12
20	07:55 17:17	07:18 18:00	07:29 19:35	18:56 (30) 19:13 (30)	06:34 20:14	19:45 (31) 19:51 (31)	05:53 21:13
21	07:55 17:18	07:17 18:00	07:28 19:37	18:57 (30) 19:11 (30)	06:32 20:15	19:44 (31) 19:53 (31)	05:52 21:13
22	07:54 17:20	07:15 18:01	07:26 19:38	19:00 (30) 19:08 (30)	06:31 20:16	19:42 (31) 19:53 (31)	05:51 21:13
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:17	19:40 (31) 19:54 (31)	05:50 20:53	05:41 21:13
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	19:40 (31) 19:56 (31)	05:49 20:54	05:41 21:13
25	07:51 17:24	07:10 18:05	07:20 19:42	06:26 20:20	19:39 (31) 19:57 (31)	05:49 20:55	05:41 21:14
26	07:50 17:25	07:09 18:07	07:18 19:43	06:24 20:21	19:39 (31) 19:58 (31)	05:48 20:56	05:41 21:14
27	07:50 17:26	07:07 18:08	07:17 19:44	06:23 20:22	19:38 (31) 19:59 (31)	05:47 20:57	05:42 21:14
28	07:49 17:28	07:05 18:09	07:15 19:45	06:21 20:24	19:38 (31) 20:01 (31)	05:46 20:58	05:42 21:14
29	07:48 17:29		07:13 19:47	06:20 20:25	19:37 (31) 20:01 (31)	05:46 20:59	05:43 21:14
30	07:47 17:31		07:11 19:48	06:18 20:26	19:37 (31) 20:03 (31)	05:45 20:59	05:43 21:14
31	07:45 17:32		07:09 19:49			05:44 21:00	
Potential sun hours	287	292	369	403	458		464
Total, worst case			152		188	234	
Sun reduction			0.59		0.61	0.65	
Oper. time red.			0.98		0.98	0.98	
Wind dir. red.			0.57		0.63	0.63	
Total reduction			0.33		0.37	0.40	
Total, real			50		70	93	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H292 - H292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:04	07:22 19:09	18:36 (30) 17:15	07:40 16:47
2	05:44 21:13	06:12 20:51	06:48 20:03	07:23 19:07	18:36 (30) 17:14	07:42 16:47
3	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	18:37 (30) 17:12	07:43 16:46
4	05:45 21:13	06:14 20:48	06:50 19:59	07:26 19:03	18:40 (30) 17:11	07:44 16:46
5	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	18:44 (30) 17:10	07:45 16:46
6	05:47 21:13	06:17 20:46	06:53 19:55	07:28 19:00	18:42 (30) 17:08	07:46 16:45
7	05:47 21:12	06:18 20:44	06:54 19:54	07:29 18:56	18:37 (30) 17:07	07:47 16:45
8	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	18:40 (30) 17:06	07:48 16:45
9	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	18:44 (30) 17:05	07:49 16:45
10	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	18:42 (30) 17:04	07:50 16:45
11	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	18:40 (30) 17:03	07:51 16:45
12	05:51 21:10	06:23 20:37	07:00 19:44	07:35 18:47	18:38 (30) 17:02	07:52 16:45
13	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45	18:36 (30) 17:00	07:52 16:45
14	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	18:34 (30) 16:59	07:53 16:45
15	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	18:32 (30) 16:58	07:54 16:46
16	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	18:30 (30) 16:57	07:55 16:46
17	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:38	18:28 (30) 16:56	07:55 16:46
18	05:56 21:06	06:30 20:28	07:07 19:33	07:43 18:37	18:26 (30) 16:55	07:56 16:47
19	05:57 21:05	06:32 20:27	07:08 19:31	07:44 18:35	18:24 (30) 16:54	07:57 16:47
20	05:58 21:04	06:33 20:25	07:09 19:29	07:46 18:33	18:22 (30) 16:54	07:57 16:47
21	05:59 21:04	06:34 20:23	07:10 19:27	18:46 (30) 18:32	18:20 (30) 16:53	07:58 16:48
22	06:00 21:03	06:35 20:22	07:11 19:26	18:42 (30) 18:30	18:18 (30) 16:52	07:58 16:48
23	06:01 21:02	06:36 20:20	07:12 19:24	18:40 (30) 18:29	18:16 (30) 16:51	07:59 16:49
24	06:02 21:01	06:37 20:18	07:14 19:22	18:39 (30) 18:27	18:14 (30) 16:51	07:59 16:49
25	06:03 21:00	06:39 20:17	07:15 19:20	18:38 (30) 18:25	18:12 (30) 16:50	08:00 16:50
26	06:04 20:59	06:40 20:15	07:16 19:18	18:37 (30) 18:24	18:10 (30) 16:49	08:00 16:51
27	06:06 20:58	06:41 20:13	07:17 19:16	18:36 (30) 18:22	18:08 (30) 16:49	08:00 16:51
28	06:07 20:57	06:42 20:12	07:18 19:14	18:35 (30) 18:21	18:06 (30) 16:48	08:01 16:52
29	06:08 20:56	06:43 20:10	07:20 19:12	18:36 (30) 18:19	18:04 (30) 16:48	08:01 16:53
30	06:09 20:55	06:44 20:08	07:21 19:11	18:36 (30) 18:18	18:02 (30) 16:47	08:01 16:54
31	06:10 20:53	06:46 20:06		08:00 18:17		08:01 16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case		424	137	17		
Sun reduction		0.74	0.69	0.63		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.63	0.57	0.57		
Total reduction		0.45	0.38	0.35		
Total, real		191	52	6		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H293 - H293

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01 16:55	07:44 17:33	16:50 (32) 18:11	07:04 08:17 (34)	07:07 19:50	18:50 (33) 20:27
2	08:02 16:56	07:43 17:35	16:54 (32) 18:12	07:02 08:16 (34)	07:05 19:52	18:52 (33) 20:29
3	08:02 16:57	07:42 17:36	07:00 18:13	07:00 08:17 (34)	07:04 19:53	18:55 (33) 20:30
4	08:02 16:58	07:41 17:37	06:58 18:15	07:25 (34) 08:16 (34)	07:02 19:54	06:12 20:31
5	08:01 16:59	07:40 17:39	06:57 18:16	07:25 (34) 08:15 (34)	07:00 19:55	06:11 20:32
6	08:01 17:00	07:38 17:40	06:55 18:17	07:25 (34) 08:15 (34)	06:58 19:56	06:09 20:33
7	08:01 17:01	07:37 17:42	06:53 18:19	07:26 (34) 08:15 (34)	06:56 19:58	06:08 20:35
8	08:01 17:02	07:36 17:43	07:51 18:20	08:26 (34) 09:14 (34)	06:55 19:59	06:07 20:36
9	08:01 17:03	07:34 17:45	07:50 19:21	08:26 (34) 09:13 (34)	06:53 20:00	06:05 20:37
10	08:00 17:05	07:33 17:46	07:48 19:23	08:27 (34) 09:11 (34)	06:51 20:01	06:04 20:38
11	08:00 17:06	07:32 17:47	07:46 19:24	08:27 (34) 09:10 (34)	06:49 20:03	06:03 20:39
12	08:00 17:07	07:30 17:49	07:44 19:25	08:28 (34) 09:08 (34)	06:47 20:04	06:02 20:40
13	07:59 17:08	07:29 17:50	07:42 19:26	08:29 (34) 09:08 (34)	06:46 20:05	06:01 20:42
14	07:59 17:09	07:27 17:52	07:49 (34) 08:01 (34)	07:40 19:28	08:30 (34) 09:06 (34)	06:44 20:06
15	07:58 17:10	16:42 (32) 07:26 16:43 (32)	07:47 (34) 07:53 08:04 (34)	07:39 19:29	08:32 (34) 19:08 (33)	06:42 20:08
16	07:58 17:12	16:41 (32) 07:25 16:44 (32)	07:46 (34) 07:37 08:07 (34)	07:37 19:30	08:33 (34) 19:09 (33)	06:41 20:09
17	07:57 17:13	16:40 (32) 07:23 16:45 (32)	07:44 (34) 07:35 08:08 (34)	07:35 19:32	08:35 (34) 19:10 (33)	06:39 20:10
18	07:57 17:14	16:41 (32) 07:21 16:47 (32)	07:42 (34) 07:33 08:09 (34)	07:33 19:33	08:39 (34) 19:11 (33)	06:37 20:11
19	07:56 17:16	16:40 (32) 07:20 16:48 (32)	07:41 (34) 07:31 08:11 (34)	07:31 19:34	18:51 (33) 19:12 (33)	06:35 20:13
20	07:55 17:17	16:40 (32) 07:18 16:50 (32)	07:39 (34) 07:29 08:12 (34)	07:29 19:35	18:51 (33) 19:14 (33)	06:34 20:14
21	07:55 17:18	16:40 (32) 07:17 16:51 (32)	07:38 (34) 07:28 08:14 (34)	07:28 19:37	18:50 (33) 19:16 (33)	06:32 20:15
22	07:54 17:20	16:40 (32) 07:15 16:52 (32)	07:36 (34) 07:26 08:14 (34)	07:26 19:38	18:49 (33) 19:17 (33)	06:30 20:16
23	07:53 17:21	16:41 (32) 07:14 16:54 (32)	07:34 (34) 07:24 08:15 (34)	07:24 19:39	18:48 (33) 19:18 (33)	06:29 20:17
24	07:52 17:22	16:41 (32) 07:12 16:56 (32)	07:33 (34) 07:22 08:16 (34)	07:22 19:40	18:47 (33) 19:19 (33)	06:27 20:19
25	07:51 17:24	16:42 (32) 07:10 16:57 (32)	07:31 (34) 07:20 08:16 (34)	07:20 19:42	18:47 (33) 19:18 (33)	06:26 20:20
26	07:50 17:25	16:42 (32) 07:09 16:59 (32)	07:29 (34) 07:18 08:16 (34)	07:18 19:43	18:47 (33) 19:18 (33)	06:24 20:21
27	07:50 17:26	16:43 (32) 07:07 17:00 (32)	07:28 (34) 07:16 08:17 (34)	07:16 19:44	18:47 (33) 19:18 (33)	06:23 20:22
28	07:49 17:28	16:44 (32) 07:05 17:01 (32)	07:26 (34) 07:15 08:17 (34)	07:15 19:45	18:47 (33) 19:17 (33)	06:21 20:24
29	07:48 17:29	16:45 (32) 07:04 17:00 (32)	07:25 (34) 07:14 16:45 (32)	07:14 19:46	18:48 (33) 19:16 (33)	06:19 20:25
30	07:46 17:30	16:45 (32) 07:03 16:58 (32)	07:24 (34) 07:13 19:48	07:13 19:47	18:48 (33) 19:15 (33)	06:18 20:26
31	07:45 17:32	16:47 (32) 07:02 16:57 (32)	07:23 (34) 07:12 19:49	07:12 19:49	18:49 (33) 19:13 (33)	06:17 21:00
Potential sun hours	287	292	369	403	458	464
Total, worst case	188	518	1161	50		
Sun reduction	0.57	0.59	0.59	0.61		
Oper. time red.	0.98	0.98	0.98	0.98		
Wind dir. red.	0.56	0.63	0.61	0.58		
Total reduction	0.31	0.36	0.35	0.35		
Total, real	59	189	410	17		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H293 - H293

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	08:08 (34)	07:01
	21:14	20:52	20:04	19:09	40 08:48 (34)	17:15
2	05:44	06:12	06:48	07:23	08:06 (34)	07:03
	21:13	20:51	20:03	19:07	42 08:48 (34)	17:14
3	05:45	06:13	06:49	07:24	08:05 (34)	07:04
	21:13	20:50	20:01	19:05	44 08:49 (34)	17:12
4	05:45	06:14	06:50	07:26	08:04 (34)	07:06
	21:13	20:48	19:59	19:03	46 08:50 (34)	17:11
5	05:46	06:15	06:51	07:27	08:03 (34)	07:07
	21:13	20:47	19:57	19:01	47 08:50 (34)	17:10
6	05:47	06:16	06:53	07:28	08:02 (34)	07:08
	21:13	20:46	19:55	19:00	48 08:50 (34)	17:08
7	05:47	06:18	06:54	07:29	08:01 (34)	07:10
	21:12	20:44	19:54	18:56	49 08:50 (34)	17:07
8	05:48	06:19	06:55	07:30	08:01 (34)	07:11
	21:12	20:43	19:52	18:54	50 08:51 (34)	17:06
9	05:49	06:20	06:56	18:48 (33)	07:32	08:00 (34)
	21:11	20:42	19:50	11 18:59 (33)	18:52	51 08:51 (34)
10	05:50	06:21	06:57	18:46 (33)	07:33	08:00 (34)
	21:11	20:40	19:48	17 19:03 (33)	18:51	50 08:50 (34)
11	05:50	06:22	06:58	18:43 (33)	07:34	07:59 (34)
	21:10	20:39	19:46	21 19:04 (33)	18:49	51 08:50 (34)
12	05:51	06:23	06:59	18:41 (33)	07:35	07:59 (34)
	21:10	20:37	19:44	24 19:05 (33)	18:47	51 08:50 (34)
13	05:52	06:25	07:01	18:40 (33)	07:37	07:59 (34)
	21:09	20:36	19:42	26 19:06 (33)	18:45	51 08:50 (34)
14	05:53	06:26	07:02	18:38 (33)	07:38	07:59 (34)
	21:09	20:34	19:41	28 19:06 (33)	18:44	50 08:49 (34)
15	05:54	06:27	07:03	18:37 (33)	07:39	08:01 (34)
	21:08	20:33	19:39	29 19:06 (33)	18:42	48 08:49 (34)
16	05:55	06:28	07:04	18:36 (33)	07:40	08:02 (34)
	21:07	20:31	19:37	30 19:06 (33)	18:40	46 08:48 (34)
17	05:55	06:29	07:05	18:35 (33)	07:42	08:03 (34)
	21:07	20:30	19:35	31 19:06 (33)	18:38	44 08:47 (34)
18	05:56	06:30	07:06	18:35 (33)	07:43	08:05 (34)
	21:06	20:28	19:33	32 19:07 (33)	18:37	42 08:47 (34)
19	05:57	06:32	07:08	18:35 (33)	07:44	08:06 (34)
	21:05	20:27	19:31	31 19:06 (33)	18:35	40 08:46 (34)
20	05:58	06:33	07:09	18:34 (33)	07:46	08:07 (34)
	21:04	20:25	19:29	31 19:05 (33)	18:33	38 08:45 (34)
21	05:59	06:34	07:10	18:34 (33)	07:47	08:09 (34)
	21:04	20:23	19:27	29 19:03 (33)	18:32	35 08:44 (34)
22	06:00	06:35	07:11	18:34 (33)	07:48	08:10 (34)
	21:03	20:22	19:26	26 19:00 (33)	18:30	32 08:42 (34)
23	06:01	06:36	07:12	18:34 (33)	07:49	08:11 (34)
	21:02	20:20	19:24	24 18:58 (33)	18:29	30 08:41 (34)
24	06:02	06:37	07:14	18:35 (33)	07:51	08:13 (34)
	21:01	20:18	19:22	22 18:57 (33)	18:27	27 08:40 (34)
25	06:03	06:39	07:15	08:24 (34)	07:52	08:14 (34)
	21:00	20:17	19:20	30 18:55 (33)	18:25	23 08:37 (34)
26	06:04	06:40	07:16	08:19 (34)	07:53	08:16 (34)
	20:59	20:15	19:18	36 18:53 (33)	18:24	20 08:36 (34)
27	06:05	06:41	07:17	08:16 (34)	07:55	08:17 (34)
	20:58	20:13	19:16	39 18:51 (33)	18:22	16 08:33 (34)
28	06:07	06:42	07:18	08:13 (34)	07:56	08:18 (34)
	20:57	20:11	19:14	39 18:49 (33)	18:21	10 08:28 (34)
29	06:08	06:43	07:19	08:11 (34)	07:57	08:11 (34)
	20:56	20:10	19:12	34 08:45 (34)	18:19	16 16:48
30	06:09	06:44	07:21	08:10 (34)	07:59	08:10 (34)
	20:55	20:08	19:11	37 08:47 (34)	18:18	16 16:47
31	06:10	06:46		08:00		08:01
	20:53	20:06		18:16		16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case			627		1121	193
Sun reduction			0.69		0.63	0.50
Oper. time red.			0.98		0.98	0.98
Wind dir. red.			0.59		0.63	0.56
Total reduction			0.40		0.39	0.27
Total, real			250		436	53

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H294 - H294

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	19:34 (34) 19:39 (34)	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	19:36 (34) 19:38 (34)	07:23 19:07	07:03 17:14	07:42 16:46
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:13 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01		07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59		07:25 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57		07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:47 21:12	06:16 20:46	06:52 19:55		07:28 18:58	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:18 20:44	06:54 19:53		07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:54 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52		07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:34 17:44	07:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50		07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:04	07:33 17:46	07:48 19:22	06:51 20:01	19:37 (34) 20:01	06:04 20:38	05:49 21:08	06:21 20:40	06:57 19:48		07:33 18:50	07:14 17:03	07:50 16:45
11	08:00 17:06	07:32 17:47	07:46 19:24	06:49 20:03	2 19:35 (34)	06:03 20:39	05:40 21:08	06:22 20:39	06:58 19:46		07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	07:44 19:25	06:47 20:04	5 19:40 (34)	06:02 20:39	05:40 21:10	06:23 20:39	06:59 19:44		07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	8 19:42 (34)	06:00 20:40	05:40 21:09	06:24 20:37	07:01 19:44		07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:51	07:40 19:28	06:44 20:06	10 19:43 (34)	05:59 20:42	05:40 21:10	06:26 20:36	07:02 19:42		07:38 18:43	07:19 17:00	07:53 16:45
15	07:58 17:10	07:26 17:53	07:39 19:29	06:42 20:08	12 19:44 (34)	05:58 20:43	05:39 21:10	06:27 20:34	07:03 19:41		07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:40 20:09	13 19:45 (34)	05:57 20:44	05:39 21:11	06:28 20:33	07:04 19:39		07:40 18:42	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	15 19:47 (34)	05:56 20:45	05:39 21:11	06:29 20:30	07:05 19:35		07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	07:33 19:33	06:37 20:11	16 19:48 (34)	05:55 20:47	05:40 21:12	06:30 20:28	07:06 19:33		07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	07:31 19:34	06:35 20:12	16 19:49 (34)	05:54 20:48	05:40 21:12	06:31 20:26	07:08 19:31		07:44 18:35	07:26 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	14 19:48 (34)	05:53 20:49	05:40 21:13	06:33 20:25	07:09 19:29		07:45 18:33	07:27 16:53	07:57 16:47
21	07:55 17:18	07:17 18:00	07:27 19:36	06:32 20:15	10 19:45 (34)	05:52 20:50	05:40 21:13	06:34 20:23	07:10 19:27	19:44 (34)	07:46 18:32	07:28 16:53	07:58 16:48
22	07:54 17:19	07:15 18:01	07:26 19:38	06:30 20:16	10 19:50 (34)	05:51 20:51	05:40 21:13	06:35 20:22	07:11 19:25		07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:03	07:24 19:39	06:29 20:17	10 19:50 (34)	05:50 20:53	05:40 21:13	06:36 20:20	07:12 19:24		07:49 18:28	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	14 19:52 (34)	05:49 20:54	05:41 21:01	06:37 20:18	07:13 19:22		07:51 18:27	07:32 16:50	07:59 16:49
25	07:51 17:23	07:10 18:05	07:20 19:41	06:26 20:20	16 19:56 (34)	05:48 20:55	05:41 21:14	06:38 20:17	07:15 19:20		07:52 18:25	07:33 16:50	08:00 16:50
26	07:50 17:25	07:09 18:07	07:18 19:43	06:24 20:21	16 19:52 (34)	05:48 20:56	05:41 21:14	06:40 20:15	07:16 19:18		07:53 18:24	07:34 16:49	08:00 16:50
27	07:49 17:26	07:07 18:08	07:16 19:44	06:22 20:22	15 19:50 (34)	05:47 20:57	05:42 21:14	06:41 20:13	07:17 19:16		07:55 18:22	07:36 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:24	14 19:48 (34)	05:46 20:57	05:42 21:14	06:42 20:11	07:18 19:14		07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 18:11	07:13 19:46	06:19 20:25	13 19:47 (34)	05:45 20:58	05:43 21:14	06:43 20:10	07:19 19:12		07:57 18:19	07:38 16:48	08:01 16:53
30	07:46 17:30	07:03 18:08	07:11 19:48	06:18 20:26	12 19:45 (34)	05:45 20:56	05:43 21:14	06:44 20:08	07:21 19:11		07:59 18:18	07:39 16:47	08:01 16:53
31	07:45 17:32	07:02 18:15	07:09 19:49	06:17 20:27	11 19:43 (34)	05:44 20:54	06:10 20:53	06:45 20:06	08:00 18:16		08:00 18:16	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377		341	289	276
Total, worst case				137				131	7				
Sun reduction				0.61				0.74	0.69				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.62				0.62	0.62				
Total reduction				0.37				0.45	0.42				
Total, real				51				59	3				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H295 - H295

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:09	07:47
	17:01	17:42	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H296 - H296

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:43 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:41 16:46
3	08:01 16:57	07:42 17:36	07:00 18:13	07:03 19:53	06:13 20:30	05:42 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:45
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:46 21:12	06:16 20:46	06:52 19:55	07:28 18:58	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:18	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:17 20:44	06:54 19:53	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	06:51 18:20	06:54 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:34 17:44	06:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:04	07:33 17:46	06:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:49 21:11	06:21 20:40	06:57 19:48	07:33 18:50	07:13 17:03	07:50 16:45
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:00 20:41	05:40 21:10	05:52 21:09	06:24 20:36	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:51	06:40 19:28	06:44 20:06	05:59 20:43	05:39 21:10	05:53 21:09	06:26 20:34	07:02 19:40	07:38 18:43	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	06:38 19:29	06:42 20:07	05:58 20:44	05:39 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:45
16	07:58 17:12	07:24 17:54	06:37 19:30	06:40 20:09	05:57 20:45	05:39 21:11	05:54 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:31	06:39 20:10	05:56 20:46	05:39 21:11	05:55 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:39 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	06:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:31 20:26	07:08 19:31	07:44 18:35	07:25 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33	07:27 16:53	07:57 16:47
21	07:55 17:18	07:17 18:00	06:27 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:47
22	07:54 17:19	07:15 18:01	06:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:02	06:24 19:39	06:29 20:17	05:50 20:52	05:40 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:28	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	05:49 20:54	05:41 21:13	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:50	07:59 16:49
25	07:51 17:23	07:10 18:05	06:20 19:41	06:25 20:20	05:48 20:55	05:41 21:13	06:03 21:00	06:38 20:16	07:15 19:20	07:52 18:25	07:33 16:50	08:00 16:50
26	07:50 17:25	07:08 18:07	06:18 19:43	06:24 20:21	05:48 20:56	05:41 21:14	06:04 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:50
27	07:49 17:26	07:07 18:08	06:16 19:44	06:22 20:22	05:47 20:56	05:42 21:14	06:05 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:36 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	06:14 19:45	06:21 20:23	05:46 20:57	05:42 21:14	06:06 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:46	06:13 20:25	06:19 20:58	05:45 20:58	05:42 21:14	05:42 20:56	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:52
30	07:46 17:30	07:03 19:48	06:11 20:26	06:18 20:59	05:45 20:59	05:43 21:14	06:09 20:54	06:44 20:08	07:21 19:10	07:59 18:18	07:39 16:47	08:01 16:53
31	07:45 17:32	07:02 19:49	06:09 20:27	06:16 21:00	05:44 21:00	06:10 20:53	06:45 20:06	08:00 18:16	08:00 18:16	08:00 18:16	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H297 - H297

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:02	16:00 (20)	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:41	15:52 (20)		
	16:55	22	16:22 (20)	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47	11	16:03 (20)
2	08:02	16:01 (20)	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	15:51 (20)		
	16:56	21	16:22 (20)	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:46	13	16:04 (20)
3	08:02	16:01 (20)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43	15:50 (20)		
	16:57	21	16:22 (20)	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46	15	16:05 (20)
4	08:02	16:02 (20)	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44	15:50 (20)		
	16:58	20	16:22 (20)	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46	16	16:06 (20)
5	08:01	16:03 (20)	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45	15:49 (20)		
	16:59	20	16:23 (20)	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46	18	16:07 (20)
6	08:01	16:03 (20)	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46	15:49 (20)		
	17:00	19	16:22 (20)	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45	19	16:08 (20)
7	08:01	16:04 (20)	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47	15:49 (20)		
	17:01	18	16:22 (20)	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45	20	16:09 (20)
8	08:01	16:06 (20)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48	15:49 (20)		
	17:02	16	16:22 (20)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45	21	16:10 (20)
9	08:01	16:07 (20)	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49	15:49 (20)		
	17:03	15	16:22 (20)	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45	21	16:10 (20)
10	08:01	16:08 (20)	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50	15:50 (20)		
	17:04	13	16:21 (20)	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45	21	16:11 (20)
11	08:00	16:09 (20)	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51	15:50 (20)		
	17:06	12	16:21 (20)	17:47	19:24	20:03	21:09	21:11	20:39	19:46	18:49	17:02	16:45	22	16:12 (20)	
12	08:00	16:11 (20)	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52	15:50 (20)		
	17:07	9	16:20 (20)	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45	22	16:12 (20)
13	07:59	16:14 (20)	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52	15:51 (20)		
	17:08	4	16:18 (20)	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45	22	16:13 (20)
14	07:59		07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53	15:51 (20)		
	17:09		17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45	23	16:14 (20)	
15	07:58		07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54	15:51 (20)		
	17:10		17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46	23	16:14 (20)	
16	07:58		07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55	15:52 (20)		
	17:12		17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46	23	16:15 (20)	
17	07:57		07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55	15:52 (20)		
	17:13		17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46	23	16:15 (20)	
18	07:57		07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56	15:53 (20)		
	17:14		17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46	23	16:16 (20)	
19	07:56		07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57	15:53 (20)		
	17:15		17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47	23	16:16 (20)	
20	07:55		07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57	15:54 (20)		
	17:17		18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47	23	16:17 (20)	
21	07:55		07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58	15:54 (20)		
	17:18		18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48	23	16:17 (20)	
22	07:54		07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58	15:55 (20)		
	17:19		18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48	23	16:18 (20)	
23	07:53		07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59	15:55 (20)		
	17:21		18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49	23	16:18 (20)	
24	07:52		07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59	15:56 (20)		
	17:22		18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49	23	16:19 (20)	
25	07:51		07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00	15:56 (20)		
	17:23		18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50	23	16:19 (20)	
26	07:50		07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00	15:56 (20)		
	17:25		18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50	23	16:19 (20)	
27	07:50		07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00	15:57 (20)		
	17:26		18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51	22	16:19 (20)	
28	07:49		07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01	15:58 (20)		
	17:28		18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52	23	16:21 (20)	
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:19	07:57	07:38		08:01	15:58 (20)		
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	4	15:58 (20)	16:53	23	16:21 (20)
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39		08:01	15:59 (20)		
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:47	9	16:02 (20)	16:53	22	16:21 (20)
31	07:45		07:09		05:44		06:10	06:45		08:00			08:01	15:59 (20)		
	17:32		19:49		21:00		20:53	20:06		18:16			16:54	22	16:21 (20)	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	652			
Total, worst case	210										13		0.50	0.49		
Sun reduction	0.57										0.50		0.49	0.98		
Oper. time red.	0.98										0.98		0.55	0.55		
Wind dir. red.	0.55										0.55		0.55	0.55		
Total reduction	0.31										0.27		0.27	0.27		
Total, real	65										4		173	173		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
 3100 DeMers Avenue
 US-GRAND FORKS, ND 58201
 +1 701 775 3000
 Jay Haley / jhaley@eapc.net
 Calculated:
 6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H299 - H299

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:55	07:44 17:33	07:04 18:11	07:07 19:50	06:16 20:27	19:49 (15) 20:03 (15)	05:44 21:01	06:11 20:52	19:53 (15) 20:26 (15)	06:47 20:04	07:22 19:09	07:02 17:15	07:41 16:47
2	08:02 16:56	07:43 17:35	07:02 18:12	07:05 19:52	06:15 20:29	19:48 (15) 20:05 (15)	05:43 21:02	06:12 21:14	19:53 (15) 20:25 (15)	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:46
3	08:02 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	19:47 (15) 20:07 (15)	05:43 21:03	06:13 21:13	19:53 (15) 20:23 (15)	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:02 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	19:46 (15) 20:07 (15)	05:42 21:04	06:14 21:13	19:53 (15) 20:22 (15)	06:50 21:59	07:26 19:03	07:06 17:11	07:44 16:46
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	19:45 (15) 20:08 (15)	05:42 21:05	06:15 21:13	19:54 (15) 20:22 (15)	06:51 21:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:57	06:09 20:33	19:45 (15) 20:10 (15)	05:41 21:05	06:16 21:13	19:54 (15) 20:20 (15)	06:53 19:55	07:28 19:00	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:35	19:44 (15) 20:10 (15)	05:41 21:06	06:18 21:12	19:55 (15) 20:45	06:54 19:54	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:55 19:59	06:07 20:36	19:43 (15) 20:12 (15)	05:41 21:07	06:19 21:12	19:55 (15) 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:35 17:45	07:50 19:21	06:53 20:00	06:05 20:37	19:43 (15) 20:13 (15)	05:49 21:07	06:20 21:11	19:56 (15) 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38	19:43 (15) 20:14 (15)	05:50 21:08	06:21 21:11	19:57 (15) 20:40	06:57 19:48	07:33 18:51	07:14 17:03	07:50 16:45
11	08:00 17:06	07:32 17:47	07:46 19:24	06:49 20:03	06:03 20:39	19:43 (15) 20:16 (15)	05:50 21:09	06:22 21:11	20:07 (15) 20:11 (15)	06:22 20:39	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	07:44 19:25	06:47 20:04	06:02 20:41	19:42 (15) 20:16 (15)	05:49 21:09	06:23 21:10	20:04 (15) 20:14 (15)	06:23 20:37	07:35 18:47	07:16 17:01	07:52 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:00 20:42	19:43 (15) 20:17 (15)	05:40 21:10	06:25 21:09	20:03 (15) 20:16 (15)	06:25 20:36	07:37 18:45	07:18 17:00	07:53 16:45
14	07:59 17:09	07:28 17:52	07:40 19:28	06:44 20:06	05:59 20:43	19:43 (15) 20:17 (15)	05:40 21:10	06:26 21:09	20:02 (15) 20:18 (15)	06:26 20:34	07:38 19:41	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	07:39 19:29	06:42 20:08	05:58 20:44	19:43 (15) 20:16 (15)	05:40 21:11	06:27 21:08	20:01 (15) 20:19 (15)	06:27 20:33	07:39 19:39	07:20 18:42	07:54 16:46
16	07:58 17:12	07:25 17:54	07:37 19:30	06:41 20:09	05:57 20:45	19:43 (15) 20:16 (15)	05:39 21:11	06:28 21:08	20:00 (15) 20:20 (15)	06:28 20:31	07:40 19:37	07:22 18:40	07:55 16:46
17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:46	19:44 (15) 20:16 (15)	05:40 21:12	06:29 21:07	19:59 (15) 20:20 (15)	06:29 20:30	07:41 19:35	07:23 18:38	07:56 16:46
18	07:57 17:14	07:22 17:57	07:33 19:33	06:37 20:11	05:55 20:47	19:44 (15) 20:16 (15)	05:40 21:12	06:30 21:06	19:58 (15) 20:21 (15)	06:30 20:28	07:42 19:33	07:24 18:43	07:57 16:46
19	07:56 17:16	07:20 17:58	07:31 19:34	06:35 20:13	05:54 20:48	19:44 (15) 20:15 (15)	05:40 21:12	06:32 21:05	19:57 (15) 20:22 (15)	06:32 20:27	07:43 19:31	07:26 18:45	07:57 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:50	19:45 (15) 20:15 (15)	05:40 21:13	06:33 21:05	19:57 (15) 20:23 (15)	06:33 20:25	07:46 19:29	07:27 18:33	07:57 16:47
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:51	19:45 (15) 20:14 (15)	05:40 21:13	06:34 21:04	19:56 (15) 20:24 (15)	06:34 20:23	07:47 19:27	07:28 18:32	07:58 16:48
22	07:54 17:19	07:15 18:01	07:26 19:38	06:30 20:16	05:51 20:52	19:47 (15) 20:15 (15)	05:40 21:13	06:35 21:03	19:56 (15) 20:24 (15)	06:35 20:22	07:48 19:26	07:30 18:30	07:59 16:48
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	05:50 20:53	19:47 (15) 20:14 (15)	05:40 21:13	06:36 21:02	19:55 (15) 20:25 (15)	06:36 20:20	07:50 19:24	07:31 18:29	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	05:49 20:54	19:48 (15) 20:13 (15)	05:41 21:14	06:37 21:01	19:55 (15) 20:26 (15)	06:37 20:18	07:51 19:22	07:32 18:27	07:59 16:49
25	07:51 17:24	07:10 18:05	07:20 19:42	06:26 20:20	05:48 20:55	19:48 (15) 20:12 (15)	05:41 21:14	06:39 21:00	19:55 (15) 20:26 (15)	06:39 20:17	07:52 19:20	07:33 18:25	08:00 16:50
26	07:51 17:25	07:09 18:07	07:18 19:43	06:24 20:21	05:48 20:56	19:50 (15) 20:12 (15)	05:41 21:14	06:40 20:59	19:54 (15) 20:26 (15)	06:40 20:15	07:53 19:18	07:35 18:24	08:00 16:50
27	07:50 17:26	07:07 18:08	07:17 19:44	06:23 20:22	05:47 20:57	19:50 (15) 20:11 (15)	05:42 21:14	06:41 20:58	19:54 (15) 20:27 (15)	06:41 20:13	07:55 19:16	07:36 18:22	08:01 16:51
28	07:49 17:28	07:05 18:09	07:15 19:45	06:21 20:24	05:46 20:58	19:51 (15) 20:01 (15)	05:42 21:14	06:42 20:57	19:54 (15) 20:27 (15)	06:42 20:12	07:56 19:14	07:37 18:21	08:01 16:52
29	07:48 17:29		07:13 19:47	06:19 20:25	05:45 20:59	19:53 (15) 20:01 (15)	05:43 21:14	06:43 20:56	19:53 (15) 20:27 (15)	06:43 20:10	07:57 19:12	07:38 18:19	08:01 16:48
30	07:47 17:30		07:11 19:48	06:18 20:26	05:45 21:00	19:54 (15) 20:08 (15)	05:43 21:14	06:44 20:55	19:53 (15) 20:27 (15)	06:44 20:08	07:59 19:11	07:39 18:18	08:01 16:53
31	07:45 17:32		07:09 19:49	06:16 21:00	05:44 21:00	19:55 (15) 20:06 (15)	05:43 21:14	06:46 20:53	19:53 (15) 20:27 (15)	06:46 20:06	08:00 18:16	07:40 17:16	08:01 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	
Total, worst case				23	799	7	524	311					
Sun reduction				0.61	0.65	0.70	0.76	0.74					
Oper. time red.				0.98	0.98	0.98	0.98	0.98					
Wind dir. red.				0.64	0.64	0.64	0.64	0.64					
Total reduction				0.38	0.41	0.44	0.48	0.46					
Total, real				9	325	3	249	144					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H300 - H300

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June			
1	08:02	16:12 (29)	07:44	07:04	07:24 (33)	07:07	06:17	05:44	06:16 (20)
	16:55	15 16:27 (29)	17:33	18:11	25 07:49 (33)	19:50	20:27	21:01	5 06:21 (20)
2	08:02	16:12 (29)	07:43	07:02	07:22 (33)	07:06	06:15	05:43	
	16:56	16 16:28 (29)	17:35	18:12	26 07:48 (33)	19:52	20:29	21:02	
3	08:02	16:13 (29)	07:42	07:00	07:21 (33)	07:04	06:14	05:43	
	16:57	16 16:29 (29)	17:36	18:13	28 07:49 (33)	19:53	20:30	21:03	
4	08:02	16:13 (29)	07:41	06:58	07:21 (33)	07:02	06:12	05:42	
	16:58	17 16:30 (29)	17:38	18:15	27 07:48 (33)	19:54	20:31	21:04	
5	08:02	16:13 (29)	07:40	06:57	07:21 (33)	07:00	06:11	05:42	
	16:59	18 16:31 (29)	17:39	18:16	26 07:47 (33)	19:55	20:32	21:05	
6	08:01	16:13 (29)	07:38	06:55	07:22 (33)	06:58	06:09	05:41	
	17:00	19 16:32 (29)	17:40	18:17	23 07:45 (33)	19:57	20:33	21:05	
7	08:01	16:13 (29)	07:37	06:53	07:24 (33)	06:56	06:08	05:41	
	17:01	20 16:33 (29)	17:42	18:19	20 07:44 (33)	19:58	20:35	21:06	
8	08:01	16:14 (29)	07:36	07:51	08:25 (33)	06:55	06:07	05:41	
	17:02	20 16:34 (29)	17:43	18:20	17 08:42 (33)	19:59	20:36	21:07	
9	08:01	16:14 (29)	07:35	07:50	08:27 (33)	06:53	06:06	05:40	
	17:04	22 16:36 (29)	17:45	19:21	12 08:39 (33)	20:00	20:37	21:07	
10	08:01	16:14 (29)	07:33	07:48	06:51	06:04	05:40	05:40	
	17:05	23 16:37 (29)	17:46	19:23	20:02	20:38	21:08	21:08	
11	08:00	16:15 (29)	07:32	07:46	06:49	06:03	05:40	05:40	06:25 (20)
	17:06	23 16:38 (29)	17:47	19:24	20:03	20:39	1 06:26 (20)	21:09	06:26 (20)
12	08:00	16:14 (29)	07:30	07:44	06:48	06:02	05:40	05:40	06:24 (20)
	17:07	25 16:39 (29)	17:49	19:25	20:04	20:41	3 06:27 (20)	21:09	06:27 (20)
13	07:59	16:15 (29)	07:29	07:42	06:46	06:01	05:40	05:40	06:22 (20)
	17:08	26 16:41 (29)	17:50	19:27	20:05	20:42	5 06:27 (20)	21:10	06:27 (20)
14	07:59	16:15 (29)	07:28	07:41	06:44	05:59	05:40	05:40	06:21 (20)
	17:09	26 16:41 (29)	17:52	19:28	20:06	20:43	6 06:27 (20)	21:10	06:27 (20)
15	07:59	16:16 (29)	07:26	07:39	06:42	05:58	05:40	05:40	06:20 (20)
	17:11	27 16:43 (29)	17:53	19:29	20:08	20:44	8 06:28 (20)	21:11	06:28 (20)
16	07:58	16:16 (29)	07:25	07:37	06:41	05:57	05:40	05:40	06:19 (20)
	17:12	28 16:44 (29)	17:54	19:30	20:09	20:45	9 06:28 (20)	21:11	06:28 (20)
17	07:57	16:16 (29)	07:23	07:35	06:39	05:56	05:40	05:40	06:18 (20)
	17:13	28 16:44 (29)	17:56	19:32	20:10	20:46	10 06:28 (20)	21:12	06:28 (20)
18	07:57	16:17 (29)	07:22	07:33	06:37	05:55	05:40	05:40	06:17 (20)
	17:14	28 16:45 (29)	17:57	19:33	20:11	20:47	11 06:28 (20)	21:12	06:28 (20)
19	07:56	16:18 (29)	07:20	07:31	06:36	05:54	05:40	05:40	06:16 (20)
	17:16	27 16:45 (29)	17:59	19:34	20:13	20:48	12 06:28 (20)	21:12	06:28 (20)
20	07:55	16:18 (29)	07:18	07:30	06:34	05:53	05:40	05:40	06:15 (20)
	17:17	27 16:45 (29)	18:00	2 07:41 (33)	19:35	20:14	13 06:28 (20)	21:13	06:28 (20)
21	07:55	16:19 (29)	07:17	07:38 (33)	07:28	06:32	05:52	05:40	06:15 (20)
	17:18	26 16:45 (29)	18:00	6 07:44 (33)	19:37	20:15	14 06:29 (20)	21:13	06:29 (20)
22	07:54	16:20 (29)	07:15	07:36 (33)	07:26	06:31	05:51	05:40	06:14 (20)
	17:20	25 16:45 (29)	18:01	10 07:46 (33)	19:38	20:16	14 06:28 (20)	21:13	06:28 (20)
23	07:53	16:21 (29)	07:14	07:34 (33)	07:24	06:29	05:50	05:41	06:13 (20)
	17:21	24 16:45 (29)	18:03	13 07:47 (33)	19:39	20:18	15 06:28 (20)	21:13	06:28 (20)
24	07:52	16:22 (29)	07:12	07:33 (33)	07:22	06:27	05:49	05:41	06:12 (20)
	17:22	22 16:44 (29)	18:04	15 07:48 (33)	19:40	20:19	15 06:27 (20)	21:14	06:27 (20)
25	07:51	16:23 (29)	07:10	07:31 (33)	07:20	06:26	05:49	05:41	06:11 (20)
	17:24	21 16:44 (29)	18:05	18 07:49 (33)	19:42	20:20	16 06:27 (20)	21:14	06:27 (20)
26	07:51	16:25 (29)	07:09	07:29 (33)	07:18	06:24	05:48	05:41	06:11 (20)
	17:25	18 16:43 (29)	18:07	20 07:49 (33)	19:43	20:21	16 06:27 (20)	21:14	06:27 (20)
27	07:50	16:26 (29)	07:07	07:28 (33)	07:17	06:23	05:47	05:42	06:10 (20)
	17:26	16 16:42 (29)	18:08	22 07:50 (33)	19:44	20:22	16 06:26 (20)	21:14	06:26 (20)
28	07:49	16:29 (29)	07:05	07:26 (33)	07:15	06:21	05:46	05:42	06:11 (20)
	17:28	11 16:40 (29)	18:09	23 07:49 (33)	19:45	20:24	14 06:25 (20)	21:14	06:25 (20)
29	07:48	16:34 (29)		07:13	07:03	06:20	05:46	05:43	06:12 (20)
	17:29	1 16:35 (29)		19:47	19:37	20:25	13 06:25 (20)	21:14	06:25 (20)
30	07:47			07:11	07:01	06:18	05:45	05:43	06:13 (20)
	17:31			19:48	19:38	20:26	11 06:24 (20)	21:14	06:24 (20)
31	07:46			07:09	07:00	05:44	06:15 (20)		06:15 (20)
	17:32			19:49	19:39	21:00	8 06:23 (20)		06:23 (20)
Potential sun hours	287	292	369	403	458	464			
Total, worst case	615	129	204	230	5				
Sun reduction	0.57	0.59	0.59	0.65	0.70				
Oper. time red.	0.98	0.98	0.98	0.98	0.98				
Wind dir. red.	0.56	0.63	0.63	0.56	0.56				
Total reduction	0.31	0.36	0.36	0.35	0.38				
Total, real	191	46	73	81	2				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H300 - H300

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:34 (20)	06:47	07:22	07:02
	21:14	20:52	20:05	19:09	17:15	16:47
2	05:44	06:12	06:48	07:23	07:03	16:20 (29)
	21:14	20:51	20:03	19:07	17:14	15:57 (29)
3	05:45	06:13	06:49	07:24	07:04	16:20 (29)
	21:13	20:50	20:01	19:05	17:12	15:57 (29)
4	05:45	06:14	06:50	07:26	08:06 (33)	16:46
	21:13	20:49	19:59	19:03	17:11	22 16:19 (29)
5	05:46	06:15	06:51	07:27	08:02 (33)	16:46
	21:13	20:47	19:57	19:01	17:10	21 15:58 (29)
6	05:47	06:17	06:53	07:28	08:00 (33)	16:46
	21:13	20:46	19:55	19:00	17:08	20 16:18 (29)
7	05:47	06:18	06:54	07:29	07:58 (33)	16:46
	21:12	20:45	19:54	18:56	17:07	19 15:59 (29)
8	05:48	06:19	06:55	07:31	07:57 (33)	16:45
	21:12	20:43	19:52	18:54	17:06	19 16:18 (29)
9	05:49	06:20	06:56	07:32	08:22 (33)	16:45
	21:12	20:42	19:50	18:52	17:05	17 16:01 (29)
10	05:50	06:21	06:57	07:33	07:55 (33)	16:45
	21:11	20:40	19:48	18:51	17:04	16 16:17 (29)
11	05:50	06:26 (20)	06:58	07:34	07:55 (33)	16:45
	21:11	20:39	19:46	18:49	17:02	16 16:17 (29)
12	05:51	06:23 (20)	07:00	07:35	07:57 (33)	16:45
	21:10	20:37	19:44	18:47	17:01	15 16:03 (29)
13	05:52	06:22 (20)	07:01	07:37	07:58 (33)	16:45
	21:09	20:36	19:43	18:45	17:00	14 16:17 (29)
14	05:53	06:21 (20)	07:02	07:38	07:59 (33)	16:45
	21:09	20:34	19:41	18:44	16:59	14 16:04 (29)
15	05:54	06:20 (20)	07:03	07:39	08:01 (33)	16:45
	21:08	20:33	19:39	18:42	16:58	14 16:05 (29)
16	05:55	06:20 (20)	07:04	07:41	08:02 (33)	16:46
	21:08	20:31	19:37	18:40	16:57	13 16:18 (29)
17	05:56	06:20 (20)	07:05	07:42	08:03 (33)	16:46
	21:07	20:30	19:35	18:38	16:56	13 16:06 (29)
18	05:56	06:20 (20)	07:07	07:43	08:05 (33)	16:46
	21:06	20:28	19:33	18:37	16:55	12 16:18 (29)
19	05:57	06:21 (20)	07:08	07:44	08:06 (33)	16:47
	21:05	20:27	19:31	18:35	16:54	12 16:19 (29)
20	05:58	06:22 (20)	07:09	07:46	08:07 (33)	16:47
	21:05	20:25	19:29	18:33	16:54	12 16:19 (29)
21	05:59	06:23 (20)	07:10	07:47	08:09 (33)	16:47
	21:04	20:23	19:28	18:32	16:53	11 16:19 (29)
22	06:00	06:24 (20)	07:11	07:48	08:10 (33)	16:48
	21:03	20:22	19:26	18:30	16:52	11 16:09 (29)
23	06:01	06:25 (20)	07:12	07:50	08:11 (33)	16:48
	21:02	20:20	19:24	18:29	16:51	11 16:20 (29)
24	06:02	06:26 (20)	07:14	07:51	07:32	16:49
	21:01	20:18	19:22	18:27	16:51	12 16:10 (29)
25	06:03	06:27 (20)	07:15	07:52	07:33	16:49
	21:00	20:17	19:20	18:26	16:50	12 16:22 (29)
26	06:04	06:28 (20)	07:16	07:54	07:35	16:50
	20:59	20:15	19:18	18:24	16:49	12 16:10 (29)
27	06:06	06:29 (20)	07:17	07:55	07:36	16:51
	20:58	20:13	19:16	18:22	16:49	12 16:22 (29)
28	06:07	06:30 (20)	07:18	07:56	07:37	16:51
	20:57	20:12	19:14	18:21	16:49	13 16:23 (29)
29	06:08	06:31 (20)	07:20	07:58	07:38	16:52
	20:56	20:10	19:13	18:19	16:48	13 16:24 (29)
30	06:09	06:32 (20)	07:21	07:59	07:39	16:53
	20:55	20:08	19:11	18:18	16:47	14 16:25 (29)
31	06:10	06:33 (20)	07:22	08:00	07:40	16:54
	20:53	20:06	18:17	18:17	16:47	14 16:12 (29)
Potential sun hours	471	435	377	341	289	276
Total, worst case	237	2		343	412	462
Sun reduction	0.76	0.74		0.63	0.50	0.49
Oper. time red.	0.98	0.98		0.98	0.98	0.98
Wind dir. red.	0.56	0.56		0.63	0.56	0.56
Total reduction	0.41	0.40		0.38	0.27	0.27
Total, real	98	1		132	112	123

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H301 - H301

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including sunrise/set times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H302 - H302

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table showing operational time by direction: N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, and Sum.

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including sunrise/sunset times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time).

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H303 - H303

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02	16:08 (26)	07:45	07:04	07:07	07:56 (19)	06:17	05:44
	16:56	19 16:27 (26)	17:33	18:11	19:51	9 08:05 (19)	20:28	21:01
2	08:02	16:09 (26)	07:43	07:02	07:06		06:15	05:43
	16:57	19 16:28 (26)	17:35	18:12	19:52		20:29	21:02
3	08:02	16:09 (26)	07:42	07:00	07:04		06:14	05:43
	16:57	20 16:29 (26)	17:36	18:14	19:53		20:30	21:03
4	08:02	16:09 (26)	07:41	06:59	07:02		06:12	05:42
	16:58	21 16:30 (26)	17:38	18:15	19:54		20:31	21:04
5	08:02	16:10 (26)	07:40	06:57	07:00		06:11	05:42
	16:59	21 16:31 (26)	17:39	18:16	19:55		20:32	21:05
6	08:02	16:10 (26)	07:39	06:55	06:58		06:10	05:42
	17:00	23 16:33 (26)	17:41	18:18	19:57		20:34	21:05
7	08:01	16:10 (26)	07:37	06:53	06:57		06:08	05:41
	17:01	23 16:33 (26)	17:42	18:19	19:58		20:35	21:06
8	08:01	16:10 (26)	07:36	07:52	06:55		06:07	05:41
	17:03	24 16:34 (26)	17:43	18:20	19:59		20:36	21:07
9	08:01	16:11 (26)	07:35	07:50	06:53		06:06	05:41
	17:04	25 16:36 (26)	17:45	19:21	20:00		20:37	21:08
10	08:01	16:10 (26)	07:33	07:48	06:51		06:04	05:40
	17:05	26 16:36 (26)	17:46	19:23	20:02		20:38	21:08
11	08:00	16:11 (26)	07:32	07:46	08:06 (19)	06:49	06:03	05:40
	17:06	27 16:38 (26)	17:48	19:24	7 08:13 (19)	20:03	20:40	21:09
12	08:00	16:11 (26)	07:31	07:44	08:05 (19)	06:48	06:02	05:40
	17:07	28 16:39 (26)	17:49	19:25	12 08:17 (19)	20:04	20:41	21:09
13	08:00	16:12 (26)	07:29	07:43	08:03 (19)	06:46	06:01	05:40
	17:08	29 16:41 (26)	17:50	19:27	15 08:18 (19)	20:05	20:42	21:10
14	07:59	16:12 (26)	07:28	07:41	08:01 (19)	06:44	06:00	05:40
	17:09	29 16:41 (26)	17:52	19:28	18 08:19 (19)	20:07	20:43	21:10
15	07:59	16:13 (26)	07:26	07:39	07:59 (19)	06:42	05:58	05:40
	17:11	30 16:43 (26)	17:53	19:29	21 08:20 (19)	20:08	20:44	21:11
16	07:58	16:13 (26)	07:25	07:37	07:57 (19)	06:41	05:57	05:40
	17:12	31 16:44 (26)	17:55	19:30	24 08:21 (19)	20:09	20:45	21:11
17	07:58	16:14 (26)	07:23	07:35	07:55 (19)	06:39	05:56	05:40
	17:13	31 16:45 (26)	17:56	19:32	26 08:21 (19)	20:10	20:46	21:12
18	07:57	16:14 (26)	07:22	07:33	07:54 (19)	06:37	05:55	05:40
	17:14	30 16:44 (26)	17:57	19:33	28 08:22 (19)	20:12	20:47	21:12
19	07:56	16:14 (26)	07:20	07:32	07:52 (19)	06:36	05:54	05:40
	17:16	30 16:44 (26)	17:59	19:34	30 08:22 (19)	20:13	20:49	21:13
20	07:56	16:14 (26)	07:19	07:30	07:50 (19)	06:34	05:53	05:40
	17:17	30 16:44 (26)	18:00	19:36	32 08:22 (19)	20:14	20:50	21:13
21	07:55	16:16 (26)	07:17	07:28	07:48 (19)	06:32	05:52	05:40
	17:18	29 16:45 (26)	18:00	19:37	34 08:22 (19)	20:15	20:51	21:13
22	07:54	16:17 (26)	07:15	07:26	07:46 (19)	06:31	05:51	05:40
	17:20	28 16:45 (26)	18:01	19:38	35 08:21 (19)	20:16	20:52	21:13
23	07:53	16:17 (26)	07:14	07:24	07:46 (19)	06:29	05:50	05:41
	17:21	27 16:44 (26)	18:03	19:39	34 08:20 (19)	20:18	20:53	21:14
24	07:52	16:18 (26)	07:12	07:22	07:46 (19)	06:27	05:50	05:41
	17:22	26 16:44 (26)	18:04	19:41	34 08:20 (19)	20:19	20:54	21:14
25	07:52	16:19 (26)	07:10	07:20	07:47 (19)	06:26	05:49	05:41
	17:24	24 16:43 (26)	18:06	19:42	33 08:20 (19)	20:20	20:55	21:14
26	07:51	16:20 (26)	07:09	07:19	07:47 (19)	06:24	05:48	05:42
	17:25	22 16:42 (26)	18:07	19:43	32 08:19 (19)	20:21	20:56	21:14
27	07:50	16:22 (26)	07:07	07:17	07:47 (19)	06:23	05:47	05:42
	17:27	20 16:42 (26)	18:08	19:44	30 08:17 (19)	20:23	20:57	21:14
28	07:49	16:24 (26)	07:05	07:15	07:48 (19)	06:21	05:46	05:42
	17:28	16 16:40 (26)	18:10	19:46	28 08:16 (19)	20:24	20:58	21:14
29	07:48	16:26 (26)		07:13	07:49 (19)	06:20	05:46	05:43
	17:29	13 16:39 (26)		19:47	25 08:14 (19)	20:25	20:59	21:14
30	07:47	16:30 (26)		07:11	07:50 (19)	06:18	05:45	05:43
	17:31	5 16:35 (26)		19:48	22 08:12 (19)	20:26	21:00	21:14
31	07:46			07:09	07:52 (19)		05:44	
	17:32			19:49	17 08:09 (19)		21:01	
Potential sun hours	287	292	369	403	458	464		
Total, worst case	726		537	9				
Sun reduction	0.57		0.59	0.61				
Oper. time red.	0.98		0.98	0.98				
Wind dir. red.	0.56		0.61	0.61				
Total reduction	0.31		0.35	0.36				
Total, real	225		188	3				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H303 - H303

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:11	06:47	07:22	07:43 (19)	07:02	07:41	15:53 (26)	
	21:14	20:52	20:05	19:09	13 07:56 (19)	17:15	16:47	27 16:20 (26)	
2	05:44	06:12	06:48	07:23	07:44 (19)	07:03	07:42	15:53 (26)	
	21:14	20:51	20:03	19:07	9 07:53 (19)	17:14	16:47	27 16:20 (26)	
3	05:45	06:13	06:49	07:25	07:46 (19)	07:04	07:43	15:54 (26)	
	21:14	20:50	20:01	19:05	4 07:50 (19)	17:13	16:46	25 16:19 (26)	
4	05:46	06:14	06:50	07:26		07:06	07:44	15:54 (26)	
	21:13	20:49	19:59	19:03		17:11	16:46	25 16:19 (26)	
5	05:46	06:16	06:52	07:27		07:07	07:45	15:55 (26)	
	21:13	20:47	19:57	19:02		17:10	16:46	23 16:18 (26)	
6	05:47	06:17	06:53	07:28		07:08	07:46	15:56 (26)	
	21:13	20:46	19:56	19:00		17:09	16:46	23 16:19 (26)	
7	05:48	06:18	06:54	07:29		07:10	07:47	15:57 (26)	
	21:12	20:45	19:54	18:56		17:07	16:45	22 16:19 (26)	
8	05:48	06:19	06:55	07:31		07:11	07:48	15:57 (26)	
	21:12	20:43	19:52	18:54		17:06	16:45	21 16:18 (26)	
9	05:49	06:20	06:56	07:32		07:13	07:49	15:58 (26)	
	21:12	20:42	19:50	18:53		17:05	16:45	20 16:18 (26)	
10	05:50	06:21	06:57	07:33		07:14	07:50	15:59 (26)	
	21:11	20:41	19:48	18:51		17:04	16:45	19 16:18 (26)	
11	05:51	06:22	06:59	07:34		07:15	07:51	15:58 (26)	
	21:11	20:39	19:46	8 07:57 (19)	18:49	17:03	16:45	19 16:17 (26)	
12	05:51	06:24	07:00	07:45 (19)	07:36	07:17	16:00 (26)	07:52	15:59 (26)
	21:10	20:38	19:45	16 08:01 (19)	18:47	17:01	7 16:07 (26)	16:45	18 16:17 (26)
13	05:52	06:25	07:01	07:42 (19)	07:37	07:18	15:58 (26)	07:53	16:00 (26)
	21:10	20:36	19:43	20 08:02 (19)	18:45	17:00	13 16:11 (26)	16:45	18 16:18 (26)
14	05:53	06:26	07:02	07:39 (19)	07:38	07:19	15:55 (26)	07:53	16:01 (26)
	21:09	20:35	19:41	25 08:04 (19)	18:44	16:59	17 16:12 (26)	16:46	17 16:18 (26)
15	05:54	06:27	07:03	07:38 (19)	07:39	07:21	15:55 (26)	07:54	16:02 (26)
	21:08	20:33	19:39	27 08:05 (19)	18:42	16:58	20 16:15 (26)	16:46	16 16:18 (26)
16	05:55	06:28	07:04	07:37 (19)	07:41	07:22	15:53 (26)	07:55	16:01 (26)
	21:08	20:32	19:37	29 08:06 (19)	18:40	16:57	22 16:15 (26)	16:46	17 16:18 (26)
17	05:56	06:29	07:06	07:36 (19)	07:42	07:23	15:52 (26)	07:56	16:02 (26)
	21:07	20:30	19:35	31 08:07 (19)	18:39	16:56	24 16:16 (26)	16:46	16 16:18 (26)
18	05:57	06:31	07:07	07:34 (19)	07:43	07:25	15:52 (26)	07:56	16:03 (26)
	21:06	20:28	19:33	33 08:07 (19)	18:37	16:55	26 16:18 (26)	16:47	16 16:19 (26)
19	05:58	06:32	07:08	07:33 (19)	07:45	07:26	15:51 (26)	07:57	16:03 (26)
	21:05	20:27	19:31	34 08:07 (19)	18:35	16:55	27 16:18 (26)	16:47	16 16:19 (26)
20	05:59	06:33	07:09	07:32 (19)	07:46	07:27	15:52 (26)	07:58	16:04 (26)
	21:05	20:25	19:30	35 08:07 (19)	18:34	16:54	28 16:20 (26)	16:47	15 16:19 (26)
21	05:59	06:34	07:10	07:32 (19)	07:47	07:28	15:51 (26)	07:58	16:04 (26)
	21:04	20:24	19:28	34 08:06 (19)	18:32	16:53	29 16:20 (26)	16:48	15 16:19 (26)
22	06:00	06:35	07:11	07:32 (19)	07:48	07:30	15:51 (26)	07:59	16:05 (26)
	21:03	20:22	19:26	34 08:06 (19)	18:30	16:52	29 16:20 (26)	16:48	15 16:20 (26)
23	06:01	06:36	07:13	07:34 (19)	07:50	07:31	15:51 (26)	07:59	16:05 (26)
	21:02	20:20	19:24	32 08:06 (19)	18:29	16:51	30 16:21 (26)	16:49	15 16:20 (26)
24	06:03	06:38	07:14	07:35 (19)	07:51	07:32	15:51 (26)	08:00	16:06 (26)
	21:01	20:19	19:22	31 08:06 (19)	18:27	16:51	30 16:21 (26)	16:49	16 16:22 (26)
25	06:04	06:39	07:15	07:36 (19)	07:52	07:34	15:51 (26)	08:00	16:06 (26)
	21:00	20:17	19:20	29 08:05 (19)	18:26	16:50	31 16:22 (26)	16:50	16 16:22 (26)
26	06:05	06:40	07:16	07:37 (19)	07:54	07:35	15:52 (26)	08:00	16:06 (26)
	20:59	20:15	19:18	27 08:04 (19)	18:24	16:49	31 16:23 (26)	16:51	16 16:22 (26)
27	06:06	06:41	07:17	07:38 (19)	07:55	07:36	15:52 (26)	08:01	16:07 (26)
	20:58	20:13	19:16	25 08:03 (19)	18:23	16:49	30 16:22 (26)	16:51	17 16:24 (26)
28	06:07	06:42	07:19	07:39 (19)	07:56	07:37	15:52 (26)	08:01	16:08 (26)
	20:57	20:12	19:15	22 08:01 (19)	18:21	16:48	30 16:22 (26)	16:52	16 16:24 (26)
29	06:08	06:43	07:20	07:41 (19)	07:58	07:38	15:53 (26)	08:01	16:08 (26)
	20:56	20:10	19:13	20 08:01 (19)	18:20	16:48	29 16:22 (26)	16:53	17 16:25 (26)
30	06:09	06:45	07:21	07:42 (19)	07:59	07:40	15:53 (26)	08:01	16:08 (26)
	20:55	20:08	19:11	17 07:59 (19)	18:18	16:47	28 16:21 (26)	16:54	17 16:25 (26)
31	06:10	06:46		08:00				08:02	16:08 (26)
	20:54	20:06		18:17				16:54	18 16:26 (26)
Potential sun hours	471	435	377	341	289		276		
Total, worst case			529	26	481		578		
Sun reduction			0.69	0.63	0.50		0.49		
Oper. time red.			0.98	0.98	0.98		0.98		
Wind dir. red.			0.61	0.61	0.56		0.56		
Total reduction			0.41	0.37	0.27		0.27		
Total, real			217	10	131		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H305 - H305

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	08:28 (26)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41		
	16:56	12 08:40 (26)	17:34	18:11	19:51	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47		
2	08:02	08:29 (26)	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42		
	16:57	11 08:40 (26)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47		
3	08:02	08:31 (26)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43		
	16:58	8 08:39 (26)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46		
4	08:02	08:32 (26)	07:41	06:59	07:02	06:12	05:42	05:46	06:15	06:50	07:26	07:06	07:44		
	16:58	7 08:39 (26)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46		
5	08:02	08:35 (26)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45		
	16:59	3 08:38 (26)	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46		
6	08:02		07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46		
	17:00		17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46		
7	08:02		07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47		
	17:02		17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46		
8	08:01		07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48		
	17:03		17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45		
9	08:01		07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49		
	17:04		17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45		
10	08:01		07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50		
	17:05		17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45		
11	08:00		07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51		
	17:06		17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45		
12	08:00		07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52		
	17:07		17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45		
13	08:00		07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53		
	17:08		17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:46		
14	07:59		07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54		
	17:10		17:52	19:28	20:07	2 07:04 (16)	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46	
15	07:59		07:26	07:39	06:43	07:03 (16)	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54	
	17:11		17:53	19:29	20:08	5 07:08 (16)	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46	
16	07:58		07:25	07:37	06:41	07:01 (16)	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55	
	17:12		17:55	19:31	20:09	7 07:08 (16)	20:45	21:12	21:08	20:32	4 07:05 (16)	19:37	18:40	16:57	16:46
17	07:58		07:23	07:35	06:39	06:59 (16)	05:56	05:40	05:56	06:29	06:57 (16)	07:06	07:42	07:23	07:56
	17:13		17:56	19:32	20:10	9 07:08 (16)	20:46	21:12	21:07	20:30	11 07:08 (16)	19:35	18:39	16:56	16:46
18	07:57		07:22	07:33	06:37	06:58 (16)	05:55	05:40	05:57	06:31	06:55 (16)	07:07	07:43	07:25	07:56
	17:15		17:57	19:33	20:12	11 07:09 (16)	20:48	21:12	21:06	20:28	14 07:09 (16)	19:33	18:37	16:56	16:47
19	07:56		07:20	07:32	06:36	06:56 (16)	05:54	05:40	05:58	06:32	06:54 (16)	07:08	07:45	07:26	07:57
	17:16		17:59	19:34	20:13	12 07:08 (16)	20:49	21:13	21:06	20:27	16 07:10 (16)	19:32	18:35	16:55	16:47
20	07:56		07:19	07:30	06:34	06:54 (16)	05:53	05:40	05:59	06:33	06:55 (16)	07:09	07:46	07:27	07:58
	17:17		18:00	19:36	20:14	13 07:07 (16)	20:50	21:13	21:05	20:25	16 07:11 (16)	19:30	18:34	16:54	16:47
21	07:55		07:17	07:28	06:32	06:53 (16)	05:52	05:40	06:00	06:34	06:57 (16)	07:10	07:47	07:29	07:58
	17:18		18:00	19:37	20:15	14 07:07 (16)	20:51	21:13	21:04	20:24	15 07:12 (16)	19:28	18:32	16:53	16:48
22	07:54		07:15	07:26	06:31	06:51 (16)	05:51	05:40	06:01	06:35	06:58 (16)	07:11	07:49	07:30	07:59
	17:20		18:02	19:38	20:17	15 07:06 (16)	20:52	21:13	21:03	20:22	14 07:12 (16)	19:26	18:30	16:52	16:48
23	07:53		07:14	07:24	06:29	06:50 (16)	05:50	05:41	06:02	06:36	06:59 (16)	07:13	07:50	07:31	07:59
	17:21		18:03	19:39	20:18	16 07:06 (16)	20:53	21:14	21:02	20:20	13 07:12 (16)	19:24	18:29	16:52	16:49
24	07:53		07:12	07:22	06:28	06:48 (16)	05:50	05:41	06:03	06:38	07:00 (16)	07:14	07:51	07:32	08:00
	17:22		18:04	19:41	20:19	16 07:04 (16)	20:54	21:14	21:01	20:19	12 07:12 (16)	19:22	18:27	16:51	16:50
25	07:52		07:11	07:20	06:26	06:50 (16)	05:49	05:41	06:04	06:39	07:01 (16)	07:15	07:52	07:34	08:00
	17:24		18:06	19:42	20:20	13 07:03 (16)	20:55	21:14	21:00	20:17	10 07:11 (16)	19:20	18:26	16:50	16:50
26	07:51		07:09	07:19	06:24	06:51 (16)	05:48	05:42	06:05	06:40	07:02 (16)	07:16	07:54	07:35	08:00
	17:25		18:07	19:43	20:21	10 07:01 (16)	20:56	21:14	20:59	20:15	9 07:11 (16)	19:18	18:24	16:50	16:51
27	07:50		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:03 (16)	07:17	07:55	07:36	08:01
	17:27		18:08	19:44	20:23	20:57	21:14	20:58	20:14	7 07:10 (16)	19:16	18:23	16:49	16:51	16:51
28	07:49		07:06	07:15	06:21	05:47	05:42	06:07	06:42	07:19	07:04 (16)	07:19	07:56	07:37	08:01
	17:28		18:10	19:46	20:24	20:58	21:14	20:57	20:12	5 07:09 (16)	19:15	18:21	16:48	16:52	16:52
29	07:48			07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:05 (16)	07:20	07:58	07:38	08:01
	17:29			19:47	20:25	20:59	21:14	20:56	20:10	2 07:07 (16)	19:13	18:20	16:48	16:53	16:53
30	07:47			07:11	06:18	05:45	05:43	06:09	06:45			07:21	07:59	07:40	08:01
	17:31			19:48	20:26	21:00	21:14	20:55	20:08			19:11	18:18	16:48	16:54
31	07:46			07:09		05:45		06:10	06:46				08:00		08:02
	17:32			19:49		21:01		20:54	20:07				18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	309		
Total, worst case	41			143				148					309		
Sun reduction	0.57			0.61				0.74					0.49		
Oper. time red.	0.98			0.98				0.98					0.98		
Wind dir. red.	0.70			0.54				0.54					0.70		
Total reduction	0.40			0.33				0.40					0.34		
Total, real	16			47				59					106		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H307 - H307

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:01	06:35	07:11	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:02	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H308 - H308

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H309 - H309

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H310 - H310

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H311 - H311

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H312 - H312

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H313 - H313

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H314 - H314

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H315 - H315

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H316 - H316

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H317 - H317

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	07:41 (10) 07:48 (10)	06:17 20:28	05:44 21:02	06:07 (9) 6 06:13 (9)
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52	07:06 20:29	06:15 21:03	05:43 21:03	06:07 (9) 7 06:14 (9)
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 19:53	07:04 20:30	06:14 21:03	05:43 21:03	06:06 (9) 7 06:13 (9)
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 19:54	07:02 20:31	06:12 21:04	05:42 21:04	06:06 (9) 8 06:14 (9)
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:33	05:42 21:05	06:06 (9) 8 06:14 (9)	
6	08:02 17:00	07:39 17:41	06:55 18:18	06:58 19:57	06:10 20:34	05:42 21:06	06:05 (9) 9 06:14 (9)	
7	08:02 17:02	07:38 17:42	06:53 18:19	06:57 19:58	06:08 20:35	05:41 21:06	06:05 (9) 9 06:14 (9)	
8	08:01 17:03	07:36 17:43	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	06:05 (9) 10 06:15 (9)	
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	06:04 (9) 10 06:14 (9)	
10	08:01 17:05	07:34 17:46	07:48 19:23	06:51 20:02	06:04 20:39	05:40 21:08	06:04 (9) 10 06:14 (9)	
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:40	05:40 21:09	06:04 (9) 11 06:15 (9)	
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	06:02 20:41	05:40 21:10	06:04 (9) 11 06:15 (9)	
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	06:04 (9) 11 06:15 (9)	
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:00 20:43	05:40 21:11	06:04 (9) 11 06:15 (9)	
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	05:58 20:44	05:40 21:11	06:04 (9) 11 06:15 (9)	
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:57 20:45	05:40 21:12	06:04 (9) 11 06:15 (9)	
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:47	05:40 21:12	06:04 (9) 11 06:15 (9)	
18	07:57 17:15	07:22 17:57	07:33 19:33	07:54 (10) 20:12	06:37 20:48	05:40 21:12	06:04 (9) 12 06:16 (9)	
19	07:56 17:16	07:20 17:59	07:32 19:34	07:52 (10) 20:13	06:36 20:49	05:40 21:13	06:04 (9) 12 06:16 (9)	
20	07:56 17:17	07:19 18:00	07:30 19:36	07:50 (10) 20:14	06:34 20:50	05:40 21:13	06:04 (9) 12 06:16 (9)	
21	07:55 17:18	07:17 18:00	07:28 19:37	07:48 (10) 20:15	06:32 20:51	05:40 21:13	06:05 (9) 12 06:17 (9)	
22	07:54 17:20	07:16 18:02	07:26 19:38	07:46 (10) 20:17	06:31 20:52	05:40 21:14	06:05 (9) 12 06:17 (9)	
23	07:54 17:21	07:14 18:03	07:24 19:39	07:44 (10) 20:18	06:29 20:53	05:41 21:14	06:05 (9) 12 06:17 (9)	
24	07:53 17:22	07:12 18:04	07:22 19:41	07:43 (10) 20:19	06:28 20:54	05:41 21:14	06:05 (9) 12 06:17 (9)	
25	07:52 17:24	07:11 18:06	07:21 19:42	07:41 (10) 20:20	06:26 20:55	05:41 21:14	06:06 (9) 12 06:18 (9)	
26	07:51 17:25	07:09 18:07	07:19 19:43	07:39 (10) 20:22	06:24 20:56	05:42 21:14	06:06 (9) 11 06:17 (9)	
27	07:50 17:27	07:07 18:08	07:17 19:44	07:37 (10) 20:23	06:23 20:57	05:42 21:14	06:06 (9) 11 06:17 (9)	
28	07:49 17:28	07:06 18:10	07:15 19:46	07:35 (10) 20:24	06:21 20:58	1 06:11 (9) 21:14	05:42 21:14	06:07 (9) 11 06:18 (9)
29	07:48 17:29		07:13 19:47	07:35 (10) 20:25	06:20 20:59	06:09 (9) 2 06:11 (9)	05:43 21:14	06:07 (9) 11 06:18 (9)
30	07:47 17:31		07:11 19:48	07:35 (10) 20:26	06:18 21:00	06:09 (9) 3 06:12 (9)	05:43 21:14	06:08 (9) 11 06:18 (9)
31	07:46 17:32		07:09 19:49	07:38 (10) 20:26	06:18 21:01	06:08 (9) 4 06:12 (9)	05:43 21:14	06:08 (9) 11 06:19 (9)
Potential sun hours	287	292	369	403	458	464		
Total, worst case			199	7	15	312		
Sun reduction			0.59	0.61	0.65	0.70		
Oper. time red.			0.98	0.98	0.98	0.98		
Wind dir. red.			0.60	0.60	0.56	0.56		
Total reduction			0.35	0.36	0.36	0.38		
Total, real			69	3	5	120		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H317 - H317

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:08 (9)	06:11	06:47	07:22	07:02	07:41	
	21:14	11 06:19 (9)	20:53	20:05	19:09	17:15	16:47	
2	05:44	06:09 (9)	06:12	06:48	07:23	07:03	07:42	
	21:14	10 06:19 (9)	20:51	20:03	19:07	17:14	16:47	
3	05:45	06:09 (9)	06:13	06:49	07:25	07:05	07:43	
	21:14	10 06:19 (9)	20:50	20:01	19:05	17:13	16:46	
4	05:46	06:10 (9)	06:15	06:51	07:26	07:06	07:44	
	21:14	10 06:20 (9)	20:49	19:59	19:04	17:11	16:46	
5	05:46	06:11 (9)	06:16	06:52	07:27	07:07	07:45	
	21:13	9 06:20 (9)	20:48	19:58	19:02	17:10	16:46	
6	05:47	06:11 (9)	06:17	06:53	07:28	07:09	07:46	
	21:13	9 06:20 (9)	20:46	19:56	19:00	17:09	16:46	
7	05:48	06:12 (9)	06:18	06:54	07:30	07:10	07:47	
	21:13	9 06:21 (9)	20:45	19:54	18:56	17:07	16:46	
8	05:48	06:13 (9)	06:19	06:55	07:31	07:11	07:48	
	21:12	8 06:21 (9)	20:44	19:52	18:54	17:06	16:45	
9	05:49	06:13 (9)	06:20	06:56	07:32	07:13	07:49	
	21:12	8 06:21 (9)	20:42	19:50	18:53	17:05	16:45	
10	05:50	06:14 (9)	06:21	06:57	07:33	07:14	07:50	
	21:11	7 06:21 (9)	20:41	19:48	18:51	17:04	16:45	
11	05:51	06:15 (9)	06:23	06:59	07:34 (10)	07:35	07:51	
	21:11	6 06:21 (9)	20:39	19:47	5 07:39 (10)	18:49	17:03	16:45
12	05:51	06:16 (9)	06:24	07:00	07:30 (10)	07:36	07:52	
	21:10	5 06:21 (9)	20:38	19:45	12 07:42 (10)	18:47	17:02	16:45
13	05:52	06:16 (9)	06:25	07:01	07:27 (10)	07:37	07:53	
	21:10	5 06:21 (9)	20:36	19:43	17 07:44 (10)	18:46	17:00	16:46
14	05:53	06:17 (9)	06:26	07:02	07:25 (10)	07:38	07:54	
	21:09	4 06:21 (9)	20:35	19:41	20 07:45 (10)	18:44	16:59	16:46
15	05:54	06:18 (9)	06:27	07:03	07:25 (10)	07:40	07:54	
	21:09	3 06:21 (9)	20:33	19:39	21 07:46 (10)	18:42	16:58	16:46
16	05:55	06:19 (9)	06:28	07:04	07:26 (10)	07:41	07:55	
	21:08	2 06:21 (9)	20:32	19:37	21 07:47 (10)	18:40	16:57	16:46
17	05:56	06:20 (9)	06:29	07:06	07:27 (10)	07:42	07:56	
	21:07	1 06:21 (9)	20:30	19:35	20 07:47 (10)	18:39	16:56	16:46
18	05:57	06:21 (9)	06:31	07:07	07:28 (10)	07:43	07:57	
	21:06	06:22 (9)	20:29	19:33	18 07:46 (10)	18:37	16:56	16:47
19	05:58	06:22 (9)	06:32	07:08	07:29 (10)	07:45	07:57	
	21:06	06:23 (9)	20:27	19:32	17 07:46 (10)	18:35	16:55	16:47
20	05:59	06:23 (9)	06:33	07:09	07:30 (10)	07:46	07:58	
	21:05	06:24 (9)	20:25	19:30	15 07:45 (10)	18:34	16:54	16:47
21	06:00	06:24 (9)	06:34	07:10	07:31 (10)	07:47	07:58	
	21:04	06:25 (9)	20:24	19:28	13 07:44 (10)	18:32	16:53	16:48
22	06:01	06:25 (9)	06:35	07:12	07:33 (10)	07:49	07:59	
	21:03	06:26 (9)	20:22	19:26	11 07:44 (10)	18:30	16:52	16:48
23	06:02	06:26 (9)	06:36	07:13	07:34 (10)	07:50	07:59	
	21:02	06:27 (9)	20:20	19:24	9 07:43 (10)	18:29	16:52	16:49
24	06:03	06:27 (9)	06:38	07:14	07:35 (10)	07:51	08:00	
	21:01	06:28 (9)	20:19	19:22	6 07:41 (10)	18:27	16:51	16:49
25	06:04	06:28 (9)	06:39	07:15	07:36 (10)	07:53	08:00	
	21:00	06:29 (9)	20:17	19:20	3 07:39 (10)	18:26	16:50	16:50
26	06:05	06:29 (9)	06:40	07:16	07:37 (10)	07:54	08:01	
	20:59	06:30 (9)	20:15	19:18	18:24	16:50	16:51	
27	06:06	06:30 (9)	06:41	07:17	07:38 (10)	07:55	08:01	
	20:58	06:31 (9)	20:14	19:17	18:23	16:49	16:51	
28	06:07	06:31 (9)	06:42	07:19	07:39 (10)	07:57	08:01	
	20:57	06:32 (9)	20:12	19:15	18:21	16:48	16:52	
29	06:08	06:32 (9)	06:44	07:20	07:40 (10)	07:58	08:01	
	20:56	06:33 (9)	20:10	19:13	18:20	16:48	16:53	
30	06:09	06:33 (9)	06:45	07:21	07:41 (10)	07:59	08:02	
	20:55	06:34 (9)	20:08	19:11	18:18	16:48	16:54	
31	06:10	06:34 (9)	06:46	07:22	07:42 (10)	08:01	08:02	
	20:54	06:35 (9)	20:07	19:10	18:17	16:47	16:55	
Potential sun hours	471	435	377	341	289	276		
Total, worst case	117		208					
Sun reduction	0.76		0.69					
Oper. time red.	0.98		0.98					
Wind dir. red.	0.56		0.60					
Total reduction	0.42		0.40					
Total, real	49		84					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H318 - H318

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	06:07 (10) 05:44	06:08 (10) 06:11	06:47 07:22	07:22 07:02	07:02 07:41	07:41 16:47
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:43 21:02	06:07 (10) 05:44	06:09 (10) 06:12	06:48 07:23	07:23 07:03	07:03 07:42	07:42 16:47
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	06:06 (10) 05:45	06:09 (10) 06:13	06:49 07:25	07:25 07:05	07:05 07:43	07:43 16:46
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 19:54	06:12 20:31	05:42 21:04	06:06 (10) 05:46	06:10 (10) 06:14	06:50 07:26	07:26 07:06	07:06 07:44	07:44 16:46
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:33	05:42 21:05	06:06 (10) 05:46	06:11 (10) 06:16	06:52 07:27	07:27 07:07	07:07 07:45	07:45 16:46
6	08:02 17:00	07:39 17:41	06:55 18:18	06:58 19:57	06:10 20:34	05:42 21:06	06:05 (10) 05:47	06:11 (10) 06:17	06:53 07:28	07:28 07:09	07:09 07:46	07:46 16:46
7	08:02 17:01	07:37 17:42	06:53 18:19	06:57 19:58	06:08 20:35	05:41 21:06	06:05 (10) 05:48	06:12 (10) 06:18	06:54 07:30	07:30 07:10	07:10 07:47	07:47 16:45
8	08:01 17:03	07:36 17:43	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	06:05 (10) 05:48	06:13 (10) 06:19	06:55 07:31	07:31 07:11	07:11 07:48	07:48 16:45
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	06:04 (10) 05:49	06:13 (10) 06:20	06:56 07:32	07:32 07:13	07:13 07:49	07:49 16:45
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	06:04 20:38	05:40 21:08	06:04 (10) 05:50	06:14 (10) 06:21	06:57 07:33	07:33 07:14	07:14 07:50	07:50 16:45
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:40	05:40 21:09	06:04 (10) 05:51	06:15 (10) 06:22	06:59 07:34	07:34 07:15	07:15 07:51	07:51 16:45
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	06:02 20:41	05:40 21:10	06:04 (10) 05:51	06:16 (10) 06:24	07:00 07:36	07:36 07:17	07:17 07:52	07:52 16:45
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:05	06:01 20:42	05:40 21:10	06:04 (10) 05:52	06:16 (10) 06:25	07:01 07:37	07:37 07:18	07:18 07:53	07:53 16:45
14	07:59 17:09	07:28 17:52	07:41 19:28	06:44 20:07	06:00 20:43	05:40 21:11	06:04 (10) 05:53	06:17 (10) 06:26	07:02 07:38	07:38 07:19	07:19 07:54	07:54 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	05:58 20:44	05:40 21:11	06:04 (10) 05:54	06:18 (10) 06:27	07:03 07:40	07:40 07:21	07:21 07:54	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:57 20:45	05:40 21:12	06:04 (10) 05:55	06:19 (10) 06:28	07:04 07:41	07:41 07:22	07:22 07:55	07:55 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:47	05:40 21:12	06:05 (10) 05:56	06:20 (10) 06:29	07:06 07:42	07:42 07:23	07:23 07:56	07:56 16:46
18	07:57 17:15	07:22 17:57	07:33 19:33	06:37 20:12	05:55 20:48	05:40 21:12	06:05 (10) 05:57	06:21 (10) 06:31	07:07 07:43	07:43 07:25	07:25 07:57	07:57 16:47
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	05:54 20:49	05:40 21:13	06:05 (10) 05:58	06:22 (10) 06:32	07:08 07:45	07:45 07:26	07:26 07:57	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	05:53 20:50	05:40 21:13	06:05 (10) 05:59	06:22 (10) 06:33	07:09 07:46	07:46 07:27	07:27 07:58	07:58 16:47
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:51	05:40 21:13	06:05 (10) 06:00	06:23 (10) 06:34	07:10 07:47	07:47 07:29	07:29 07:58	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:51 20:52	05:40 21:14	06:06 (10) 06:01	06:24 (10) 06:35	07:11 07:49	07:49 07:30	07:30 07:59	07:59 16:48
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	05:50 20:53	05:41 21:14	06:06 (10) 06:02	06:25 (10) 06:36	07:13 07:50	07:50 07:31	07:31 07:59	07:59 16:49
24	07:53 17:22	07:12 18:04	07:22 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:06 (10) 06:03	06:26 (10) 06:38	07:14 07:51	07:51 07:32	07:32 08:00	08:00 16:49
25	07:52 17:24	07:11 18:06	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:07 (10) 06:04	06:27 (10) 06:39	07:15 07:52	07:52 07:34	07:34 08:00	08:00 16:49
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:22	05:48 20:56	05:42 21:14	06:06 (10) 06:05	06:29 (10) 06:40	07:16 07:54	07:54 07:35	07:35 08:01	08:01 16:50
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 (10) 06:06	06:32 (10) 06:41	07:17 07:55	07:55 07:36	07:36 08:01	08:01 16:51
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	05:46 20:58	05:42 21:14	06:07 (10) 06:07	06:38 (10) 06:42	07:19 07:56	07:56 07:37	07:37 08:01	08:01 16:52
29	07:48 17:29	07:06 18:10	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:07 (10) 06:08	06:43 07:20	07:20 07:58	07:58 07:39	07:39 08:01	08:01 16:53
30	07:47 17:31	07:07 18:11	07:11 19:48	06:18 20:26	05:45 20:58	05:43 21:14	06:08 (10) 06:09	06:45 07:21	07:21 07:59	07:59 07:40	07:40 08:02	08:02 16:54
31	07:46 17:32	07:09 19:49	07:09 19:49	05:44 21:01	06:08 (10) 06:58 (10)	05:44 21:01	06:10 20:54	06:46 20:07	08:00 18:17	18:17 16:54	16:54 16:54	16:54 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case					582	1747	1220					
Sun reduction					0.65	0.70	0.76					
Oper. time red.					0.98	0.98	0.98					
Wind dir. red.					0.56	0.56	0.56					
Total reduction					0.36	0.38	0.42					
Total, real					207	669	507					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H319 - H319

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02	08:26 (12)	07:45	07:04	07:08	06:17	05:44
	16:56	21 08:47 (12)	17:33	18:11	19:51	20:28	22 20:25 (10)
2	08:02	08:26 (12)	07:43	07:02	07:06	06:15	05:43
	16:56	21 08:47 (12)	17:35	18:12	19:52	20:29	21 20:25 (10)
3	08:02	08:26 (12)	07:42	07:00	07:04	06:14	05:43
	16:57	22 08:48 (12)	17:36	18:14	19:53	20:30	20 20:24 (10)
4	08:02	08:26 (12)	07:41	06:59	07:02	06:12	05:42
	16:58	23 08:49 (12)	17:38	18:15	19:54	20:31	19 20:24 (10)
5	08:02	08:26 (12)	07:40	06:57	07:00	06:11	05:42
	16:59	24 08:50 (12)	17:39	18:16	19:56	20:32	18 20:23 (10)
6	08:02	08:26 (12)	07:39	06:55	06:58	06:10	05:42
	17:00	24 08:50 (12)	17:41	18:18	19:57	20:34	17 20:23 (10)
7	08:02	08:25 (12)	07:37	06:53	06:57	06:08	20:08 (10) 05:41
	17:01	25 08:50 (12)	17:42	18:19	19:58	20:35	3 20:11 (10) 21:06
8	08:01	08:25 (12)	07:36	07:52	06:55	06:07	20:05 (10) 05:41
	17:02	26 08:51 (12)	17:43	18:20	19:59	20:36	7 20:12 (10) 21:07
9	08:01	08:25 (12)	07:35	07:50	06:53	06:06	20:04 (10) 05:41
	17:04	27 08:52 (12)	17:45	19:21	20:00	20:37	9 20:13 (10) 21:08
10	08:01	08:24 (12)	07:33	07:48	06:51	06:04	20:03 (10) 05:40
	17:05	28 08:52 (12)	17:46	19:23	20:02	20:38	11 20:14 (10) 21:08
11	08:00	08:24 (12)	07:32	07:46	06:49	06:03	20:02 (10) 05:40
	17:06	29 08:53 (12)	17:48	19:24	20:03	20:40	14 20:16 (10) 21:09
12	08:00	08:24 (12)	07:31	07:44	06:48	06:02	20:01 (10) 05:40
	17:07	30 08:54 (12)	17:49	19:25	20:04	20:41	16 20:17 (10) 21:10
13	08:00	08:23 (12)	07:29	07:43	06:46	06:01	19:59 (10) 05:40
	17:08	31 08:54 (12)	17:50	19:27	20:05	20:42	18 20:17 (10) 21:10
14	07:59	08:23 (12)	07:28	07:41	06:44	06:00	19:59 (10) 05:40
	17:09	32 08:55 (12)	17:52	19:28	20:07	20:43	19 20:18 (10) 21:11
15	07:59	08:22 (12)	07:26	07:39	06:42	05:58	19:59 (10) 05:40
	17:11	33 08:55 (12)	17:53	19:29	20:08	20:44	20 20:19 (10) 21:11
16	07:58	08:22 (12)	07:25	07:37	06:41	05:57	19:58 (10) 05:40
	17:12	33 08:55 (12)	17:55	19:31	20:09	20:45	22 20:20 (10) 21:12
17	07:58	08:23 (12)	07:23	07:35	06:39	05:56	19:58 (10) 05:40
	17:13	32 08:55 (12)	17:56	19:32	20:10	20:46	23 20:21 (10) 21:12
18	07:57	08:23 (12)	07:22	07:33	06:37	05:55	19:58 (10) 05:40
	17:14	32 08:55 (12)	17:57	19:33	20:12	20:48	24 20:22 (10) 21:12
19	07:56	08:23 (12)	07:20	07:32	06:36	05:54	19:58 (10) 05:40
	17:16	32 08:55 (12)	17:59	19:34	20:13	20:49	25 20:23 (10) 21:13
20	07:56	08:24 (12)	07:19	07:30	06:34	05:53	19:58 (10) 05:40
	17:17	31 08:55 (12)	18:00	19:36	20:14	20:50	26 20:24 (10) 21:13
21	07:55	08:25 (12)	07:17	07:28	06:32	05:52	19:59 (10) 05:40
	17:18	31 08:56 (12)	18:00	19:37	20:15	20:51	27 20:26 (10) 21:13
22	07:54	08:26 (12)	07:15	07:26	06:31	05:51	19:59 (10) 05:40
	17:20	30 08:56 (12)	18:01	19:38	20:17	20:52	28 20:27 (10) 21:13
23	07:53	08:26 (12)	07:14	07:24	06:29	05:50	19:59 (10) 05:41
	17:21	29 08:55 (12)	18:03	19:39	20:18	20:53	28 20:27 (10) 21:14
24	07:53	08:27 (12)	07:12	07:22	06:27	05:49	19:59 (10) 05:41
	17:22	28 08:55 (12)	18:04	19:41	20:19	20:54	27 20:26 (10) 21:14
25	07:52	08:28 (12)	07:11	07:20	06:26	05:49	19:59 (10) 05:41
	17:24	26 08:54 (12)	18:06	19:42	20:20	20:55	27 20:26 (10) 21:14
26	07:51	08:29 (12)	07:09	07:19	06:24	05:48	20:00 (10) 05:42
	17:25	25 08:54 (12)	18:07	19:43	20:21	20:56	27 20:27 (10) 21:14
27	07:50	08:30 (12)	07:07	07:17	06:23	05:47	20:00 (10) 05:42
	17:26	23 08:53 (12)	18:08	19:44	20:23	20:57	26 20:26 (10) 21:14
28	07:49	08:32 (12)	07:06	07:15	06:21	05:46	20:00 (10) 05:42
	17:28	20 08:52 (12)	18:10	19:46	20:24	20:58	26 20:26 (10) 21:14
29	07:48	08:34 (12)		07:13	06:20	05:46	20:01 (10) 05:43
	17:29	16 08:50 (12)		19:47	20:25	20:59	25 20:26 (10) 21:14
30	07:47	08:36 (12)		07:11	06:18	05:45	20:01 (10) 05:43
	17:31	12 08:48 (12)		19:48	20:26	21:00	24 20:25 (10) 21:14
31	07:46	08:42 (12)		07:09		05:44	20:03 (10)
	17:32	1 08:43 (12)		19:49		21:01	23 20:26 (10)
Potential sun hours	287	292	369	403	458		464
Total, worst case	797				525		209
Sun reduction	0.57				0.65		0.70
Oper. time red.	0.98				0.98		0.98
Wind dir. red.	0.70				0.66		0.66
Total reduction	0.39				0.42		0.45
Total, real	311				220		94

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H319 - H319

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December							
1	05:44	20:15 (10)	06:11	20:11 (10)	06:47	07:22	07:02		07:41	08:06 (12)			
	21:14	9	20:24 (10)	20:52	15	20:26 (10)	20:05	19:09	17:15	29	08:35 (12)		
2	05:44	20:15 (10)	06:12	20:13 (10)	06:48	07:23	07:03		07:42		08:07 (12)		
	21:14	11	20:26 (10)	20:51	13	20:26 (10)	20:03	19:07	17:14	28	08:35 (12)		
3	05:45	20:14 (10)	06:13	20:14 (10)	06:49	07:25	07:04		07:43		08:08 (12)		
	21:14	12	20:26 (10)	20:50	10	20:24 (10)	20:01	19:05	17:13	27	08:35 (12)		
4	05:46	20:14 (10)	06:14	20:15 (10)	06:50	07:26	07:06		07:44		08:10 (12)		
	21:13	13	20:27 (10)	20:49	8	20:23 (10)	19:59	19:03	17:11	26	08:36 (12)		
5	05:46	20:13 (10)	06:16	20:16 (10)	06:52	07:27	07:07		07:45		08:11 (12)		
	21:13	15	20:28 (10)	20:47	6	20:22 (10)	19:58	19:02	17:10	25	08:36 (12)		
6	05:47	20:13 (10)	06:17	20:19 (10)	06:53	07:28	07:09		07:46		08:12 (12)		
	21:13	16	20:29 (10)	20:46	1	20:20 (10)	19:56	19:00	17:09	25	08:37 (12)		
7	05:47	20:13 (10)	06:18		06:54	07:29	07:10		07:47		08:13 (12)		
	21:13	17	20:30 (10)	20:45		19:54	18:56	17:07	16:45	24	08:37 (12)		
8	05:48	20:12 (10)	06:19		06:55	07:31	07:11		07:48		08:14 (12)		
	21:12	18	20:30 (10)	20:43		19:52	18:54	17:06	16:45	23	08:37 (12)		
9	05:49	20:11 (10)	06:20		06:56	07:32	07:13		07:49		08:15 (12)		
	21:12	20	20:31 (10)	20:42		19:50	18:53	17:05	16:45	22	08:37 (12)		
10	05:50	20:11 (10)	06:21		06:57	07:33	07:14		07:50		08:16 (12)		
	21:11	21	20:32 (10)	20:41		19:48	18:51	17:04	16:45	22	08:38 (12)		
11	05:50	20:11 (10)	06:22		06:59	07:34	07:15		08:12 (12)	07:51	08:17 (12)		
	21:11	22	20:33 (10)	20:39		19:46	18:49	17:03	3	08:15 (12)	16:45	21	08:38 (12)
12	05:51	20:10 (10)	06:24		07:00	07:36	07:17		08:07 (12)	07:52		08:17 (12)	
	21:10	23	20:33 (10)	20:38		19:45	18:47	17:01	13	08:20 (12)	16:45	20	08:37 (12)
13	05:52	20:10 (10)	06:25		07:01	07:37	07:18		08:06 (12)	07:53		08:18 (12)	
	21:10	23	20:33 (10)	20:36		19:43	18:45	17:00	16	08:22 (12)	16:45	20	08:38 (12)
14	05:53	20:10 (10)	06:26		07:02	07:38	07:19		08:04 (12)	07:54		08:19 (12)	
	21:09	24	20:34 (10)	20:35		19:41	18:44	16:59	20	08:24 (12)	16:46	19	08:38 (12)
15	05:54	20:10 (10)	06:27		07:03	07:39	07:21		08:03 (12)	07:54		08:20 (12)	
	21:08	25	20:35 (10)	20:33		19:39	18:42	16:58	23	08:26 (12)	16:46	19	08:39 (12)
16	05:55	20:10 (10)	06:28		07:04	07:41	07:22		08:02 (12)	07:55		08:21 (12)	
	21:08	25	20:35 (10)	20:32		19:37	18:40	16:57	25	08:27 (12)	16:46	18	08:39 (12)
17	05:56	20:10 (10)	06:29		07:06	07:42	07:23		08:02 (12)	07:56		08:21 (12)	
	21:07	26	20:36 (10)	20:30		19:35	18:39	16:56	26	08:28 (12)	16:46	18	08:39 (12)
18	05:57	20:09 (10)	06:31		07:07	07:43	07:25		08:01 (12)	07:56		08:22 (12)	
	21:06	27	20:36 (10)	20:28		19:33	18:37	16:55	28	08:29 (12)	16:47	18	08:40 (12)
19	05:58	20:08 (10)	06:32		07:08	07:45	07:26		08:00 (12)	07:57		08:22 (12)	
	21:06	28	20:36 (10)	20:27		19:31	18:35	16:55	29	08:29 (12)	16:47	17	08:39 (12)
20	05:58	20:08 (10)	06:33		07:09	07:46	07:27		08:01 (12)	07:58		08:23 (12)	
	21:05	28	20:36 (10)	20:25		19:30	18:34	16:54	30	08:31 (12)	16:47	17	08:40 (12)
21	05:59	20:08 (10)	06:34		07:10	07:47	07:29		08:00 (12)	07:58		08:24 (12)	
	21:04	28	20:36 (10)	20:24		19:28	18:32	16:53	31	08:31 (12)	16:48	17	08:41 (12)
22	06:00	20:08 (10)	06:35		07:11	07:48	07:30		08:01 (12)	07:59		08:24 (12)	
	21:03	28	20:36 (10)	20:22		19:26	18:30	16:52	31	08:32 (12)	16:48	17	08:41 (12)
23	06:01	20:08 (10)	06:36		07:13	07:50	07:31		08:00 (12)	07:59		08:24 (12)	
	21:02	27	20:35 (10)	20:20		19:24	18:29	16:51	32	08:32 (12)	16:49	17	08:41 (12)
24	06:02	20:08 (10)	06:38		07:14	07:51	07:32		08:00 (12)	08:00		08:25 (12)	
	21:01	26	20:34 (10)	20:19		19:22	18:27	16:51	32	08:32 (12)	16:49	17	08:42 (12)
25	06:04	20:09 (10)	06:39		07:15	07:52	07:34		08:01 (12)	08:00		08:25 (12)	
	21:00	24	20:33 (10)	20:17		19:20	18:26	16:50	33	08:34 (12)	16:50	18	08:43 (12)
26	06:05	20:09 (10)	06:40		07:16	07:54	07:35		08:01 (12)	08:00		08:25 (12)	
	20:59	23	20:32 (10)	20:15		19:18	18:24	16:49	33	08:34 (12)	16:51	18	08:43 (12)
27	06:06	20:09 (10)	06:41		07:17	07:55	07:36		08:01 (12)	08:01		08:26 (12)	
	20:58	22	20:31 (10)	20:13		19:16	18:23	16:49	33	08:34 (12)	16:51	18	08:44 (12)
28	06:07	20:09 (10)	06:42		07:19	07:56	07:37		08:02 (12)	08:01		08:26 (12)	
	20:57	21	20:30 (10)	20:12		19:15	18:21	16:48	32	08:34 (12)	16:52	18	08:44 (12)
29	06:08	20:09 (10)	06:43		07:20	07:58	07:38		08:04 (12)	08:01		08:26 (12)	
	20:56	20	20:29 (10)	20:10		19:13	18:20	16:48	31	08:35 (12)	16:53	19	08:45 (12)
30	06:09	20:10 (10)	06:45		07:21	07:59	07:40		08:05 (12)	08:01		08:26 (12)	
	20:55	18	20:28 (10)	20:08		19:11	18:18	16:47	30	08:35 (12)	16:54	19	08:45 (12)
31	06:10	20:10 (10)	06:46				08:00			08:02			08:26 (12)
	20:54	17	20:27 (10)	20:06			18:17			16:54	20	08:46 (12)	
Potential sun hours	471		435		377	341	289		531	636			
Total, worst case	657		53				531		0.50	0.49			
Sun reduction	0.76		0.74				0.50			0.49			
Oper. time red.	0.98		0.98				0.98			0.98			
Wind dir. red.	0.66		0.66				0.70			0.70			
Total reduction	0.49		0.48				0.34			0.34			
Total, real	322		25				182			213			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H320 - H320

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:09 (12)	07:22	07:02	07:41		
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:52	20:05	23	07:32 (12)	19:09	17:15	16:47	
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:10 (12)	07:23	07:03	07:42		
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	21	07:31 (12)	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:11 (12)	07:25	07:04	07:43		
	16:57	17:36	18:14	19:53	5 07:29 (12)	20:30	21:03	21:14	20:50	20:01	20	07:31 (12)	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:50	07:12 (12)	07:26	07:06	07:44		
	16:58	17:38	18:15	19:54	8 07:30 (12)	20:31	21:04	21:13	20:49	18	07:30 (12)	19:03	17:11	16:46	
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	16	07:13 (12)	07:27	07:07	07:45	
	16:59	17:39	18:16	19:56	11 07:31 (12)	20:32	21:05	21:13	20:47	16	07:29 (12)	19:02	17:10	16:46	
6	08:02	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	14	07:14 (12)	07:28	07:09	07:46	
	17:00	17:41	18:18	19:57	14 07:33 (12)	20:34	21:06	21:13	20:46	14	07:28 (12)	19:00	17:09	16:46	
7	08:02	07:37	06:53	06:57	07:17 (12)	06:08	05:41	05:48	06:18	06:54	07:15 (12)	07:29	07:10	07:47	
	17:01	17:42	18:19	19:58	16 07:33 (12)	20:35	21:06	21:13	20:45	11	07:26 (12)	18:56	17:07	16:45	
8	08:01	07:36	07:52	06:55	07:15 (12)	06:07	05:41	05:48	06:19	06:55	07:17 (12)	07:31	07:11	07:48	
	17:03	17:43	18:20	19:59	18 07:33 (12)	20:36	21:07	21:12	20:43	8	07:25 (12)	18:54	17:06	16:45	
9	08:01	07:35	07:50	06:53	07:13 (12)	06:06	05:41	05:49	06:20	06:56	07:18 (12)	07:32	07:13	07:49	
	17:04	17:45	18:22	20:00	20 07:33 (12)	20:37	21:08	21:12	20:42	5	07:23 (12)	18:53	17:05	16:45	
10	08:01	07:33	07:48	06:51	07:11 (12)	06:04	05:40	05:50	06:21	06:57	07:19 (12)	07:33	07:14	07:50	
	17:05	17:46	18:23	20:02	21 07:32 (12)	20:38	21:08	21:11	20:41	1	07:20 (12)	18:51	17:04	16:45	
11	08:00	07:32	07:46	06:49	07:10 (12)	06:03	05:40	05:51	06:22	06:59	07:34	07:15	07:51		
	17:06	17:48	18:24	20:03	23 07:33 (12)	20:40	21:09	21:11	20:39	19:46	18:49	17:03	16:45		
12	08:00	07:31	07:44	06:48	07:08 (12)	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52		
	17:07	17:49	18:25	20:04	24 07:32 (12)	20:41	21:09	21:10	20:38	19:45	18:47	17:01	16:45		
13	08:00	07:29	07:43	06:46	07:06 (12)	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53		
	17:08	17:50	18:27	20:05	25 07:31 (12)	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45		
14	07:59	07:28	07:41	06:44	07:04 (12)	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54		
	17:09	17:52	18:28	20:07	26 07:30 (12)	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46		
15	07:59	07:26	07:39	06:42	07:05 (12)	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54		
	17:11	17:53	18:29	20:08	25 07:30 (12)	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46		
16	07:58	07:25	07:37	06:41	07:05 (12)	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55		
	17:12	17:55	18:31	20:09	24 07:29 (12)	20:45	21:11	21:08	20:32	19:37	18:40	16:57	16:46		
17	07:58	07:23	07:35	06:39	07:06 (12)	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56		
	17:13	17:56	18:32	20:10	21 07:27 (12)	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46		
18	07:57	07:22	07:33	06:37	07:07 (12)	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56		
	17:14	17:57	18:33	20:12	19 07:26 (12)	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:47		
19	07:56	07:20	07:32	06:36	07:09 (12)	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57	09:00 (17)	
	17:16	17:59	18:34	20:13	15 07:24 (12)	20:49	21:13	21:06	20:27	19:31	18:35	16:55	16:47	3 09:03 (17)	
20	07:56	07:19	07:30	06:34	07:11 (12)	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58	09:00 (17)	
	17:17	18:00	18:36	20:14	9 07:20 (12)	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47	4 09:04 (17)	
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:10	07:47	07:29	07:58	09:01 (17)	
	17:18	18:00	18:37	20:15	20:51	21:13	21:04	20:24	19:28	19:28	18:32	16:53	16:48	5 09:06 (17)	
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:11	07:48	07:30	07:59	09:01 (17)	
	17:20	18:01	18:38	20:17	20:52	21:13	21:03	20:22	19:26	19:26	18:30	16:52	16:48	5 09:06 (17)	
23	07:53	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:13	07:50	07:31	07:59	09:01 (17)	
	17:21	18:03	18:39	20:18	20:53	21:14	21:02	20:20	11 07:26 (12)	19:24	18:29	16:51	16:49	4 09:05 (17)	
24	07:53	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:12 (12)	07:14	07:51	07:32	08:00	09:03 (17)	
	17:22	18:04	18:41	20:19	20:54	21:14	21:01	20:19	16 07:28 (12)	19:22	18:27	16:51	16:49	3 09:06 (17)	
25	07:52	07:11	07:20	06:26	05:49	05:41	06:04	06:39	07:10 (12)	07:15	07:52	07:34	08:00		
	17:24	18:06	18:42	20:20	20:55	21:14	21:00	20:17	19 07:29 (12)	19:20	18:26	16:50	16:50		
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:08 (12)	07:16	07:54	07:35	08:00		
	17:25	18:07	18:43	20:21	20:56	21:14	20:59	20:15	22 07:30 (12)	19:18	18:24	16:49	16:51		
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:07 (12)	07:17	07:55	07:36	08:01		
	17:27	18:08	18:44	20:23	20:57	21:14	20:58	20:13	24 07:31 (12)	19:16	18:23	16:49	16:51		
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:06 (12)	07:19	07:56	07:37	08:01		
	17:28	18:10	18:46	20:24	20:58	21:14	20:57	20:12	25 07:31 (12)	19:15	18:21	16:48	16:52		
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:05 (12)	07:20	07:58	07:38	08:01		
	17:29		18:47	20:25	20:59	21:14	20:56	20:10	26 07:31 (12)	19:13	18:20	16:48	16:53		
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:07 (12)	07:21	07:59	07:40	08:01		
	17:31		18:48	20:26	21:00	21:14	20:55	20:08	25 07:32 (12)	19:11	18:18	16:47	16:54		
31	07:46		07:09		05:44		06:10	06:46	07:08 (12)		08:00		08:02		
	17:32		18:49		21:01		20:54	20:06	24 07:32 (12)		18:17		16:54		
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276			
Total, worst case				324				192	137				24		
Sun reduction				0.61				0.74	0.69				0.49		
Oper. time red.				0.98				0.98	0.98				0.98		
Wind dir. red.				0.56				0.56	0.56				0.70		
Total reduction				0.34				0.41	0.38				0.34		
Total, real				109				79	52				8		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H321 - H321

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:33	07:04 18:11	07:07 19:50	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	07:43 (13) 17:15	07:41 16:47
2	08:02 16:56	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:43 21:02	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	07:44 (13) 17:14	07:42 16:47
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	07:46 (13) 17:14	07:43 16:46
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:49	06:50 19:59	07:26 19:03	07:47 (13) 17:12	07:44 16:46
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:05	05:46 21:13	06:15 20:47	06:52 19:57	07:27 19:02	07:48 (13) 17:10	07:45 16:46
6	08:02 17:00	07:39 17:40	06:55 18:18	06:58 19:57	06:10 20:34	05:41 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	07:49 (13) 17:09	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:57 19:58	06:08 20:35	05:41 21:06	05:47 21:12	06:18 20:45	06:54 19:54	07:29 18:56	07:10 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:52 18:20	08:12 (13) 19:59	06:57 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:31 18:54	07:11 17:06	07:48 16:45
9	08:01 17:04	07:35 17:45	07:50 19:21	08:10 (13) 20:00	06:53 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53	07:13 17:05	07:49 16:45
10	08:01 17:05	07:33 17:46	07:48 19:23	08:08 (13) 20:02	06:51 20:38	05:40 21:08	05:50 21:11	06:21 20:41	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:48	07:46 19:24	08:06 (13) 20:03	06:49 20:40	05:40 21:09	05:50 21:11	06:22 20:39	06:59 19:46	07:34 18:49	07:15 17:03	07:51 16:45
12	08:00 17:07	07:31 17:49	07:44 19:25	08:05 (13) 20:04	06:48 20:41	05:40 21:09	05:51 21:10	06:24 20:38	07:00 19:45	07:36 18:47	07:17 17:01	07:52 16:45
13	08:00 17:08	07:29 17:50	07:42 19:27	08:03 (13) 20:05	06:46 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:45	07:18 17:00	07:53 16:45
14	07:59 17:09	07:28 17:52	07:41 19:28	08:01 (13) 20:07	06:44 20:43	05:39 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:19 16:59	07:54 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	07:59 (13) 20:08	06:42 20:44	05:38 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:21 16:58	07:54 16:46
16	07:58 17:12	07:25 17:54	07:37 19:30	07:57 (13) 20:09	06:41 20:45	05:37 21:11	05:55 21:08	06:28 20:32	07:04 19:37	07:41 18:40	07:22 16:57	07:55 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	07:55 (13) 20:10	06:39 20:46	05:36 21:12	05:56 21:07	06:29 20:30	07:06 19:35	07:42 18:39	07:23 16:56	07:56 16:46
18	07:57 17:14	07:22 17:57	07:33 19:33	07:57 (13) 20:12	06:37 20:48	05:35 21:12	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:25 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	07:58 (13) 20:13	06:36 20:49	05:34 21:13	05:57 21:06	06:32 20:27	07:08 19:31	07:45 18:35	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	08:01 (13) 20:14	06:34 20:50	05:33 21:13	05:58 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:47
21	07:55 17:18	07:17 18:00	07:28 19:37	08:07 (13) 20:15	06:32 20:51	05:32 21:13	05:59 21:04	06:34 20:24	07:10 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	05:51 20:52	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:30 16:52	07:59 16:48
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	05:50 20:53	05:41 21:14	06:01 21:02	06:36 20:20	07:13 19:24	07:50 18:29	07:31 16:51	07:59 16:49
24	07:53 17:22	07:12 18:04	07:22 19:41	06:27 20:19	05:49 20:54	05:41 21:14	06:02 21:01	06:38 20:19	07:14 19:22	07:51 18:27	07:32 16:51	08:00 16:49
25	07:52 17:24	07:10 18:05	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:34 16:50	08:00 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:21	05:48 20:56	05:41 21:14	06:04 20:59	06:40 20:15	07:16 19:18	07:54 18:24	07:35 16:49	08:00 16:51
27	07:50 17:26	07:07 18:08	07:17 19:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49	08:01 16:51
28	07:49 17:28	07:05 18:10	07:15 19:46	06:21 20:24	05:46 20:58	05:42 21:14	06:07 20:57	06:42 20:12	07:18 19:15	07:56 18:21	07:37 16:48	08:01 16:52
29	07:48 17:29		07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	07:58 18:20	07:38 16:48	08:01 16:53
30	07:47 17:31		07:11 19:48	06:18 20:26	05:45 21:00	05:43 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	07:40 16:47	08:01 16:54
31	07:46 17:32		07:09 19:49		05:44 21:01		06:10 20:54	06:46 20:06		08:00 18:17		08:02 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case			161						109		48	
Sun reduction			0.59						0.69		0.63	
Oper. time red.			0.98						0.98		0.98	
Wind dir. red.			0.61						0.61		0.61	
Total reduction			0.35						0.41		0.38	
Total, real			57						45		18	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H322 - H322

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02 16:55	07:45 17:33	07:04 18:11	07:07 18:11 (14)	06:17 20:27	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	18:19 (12) 18:31 (12)	07:02 17:15	07:41 16:47	
2	08:02 16:56	07:43 17:35	07:02 18:12	07:06 18:12 (14)	06:15 20:29	05:43 21:02	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	12 16	17:15 17:14	07:42 16:47	
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 18:14 (14)	06:14 20:30	05:43 21:03	05:45 21:14	06:13 20:50	06:49 20:01	07:24 19:05	16 20	17:14 17:12	07:43 16:46	
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 18:15 (14)	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:49	06:50 19:59	07:26 19:03	20 21	17:12 17:11	07:44 16:46	
5	08:02 16:59	07:40 17:39	06:57 18:16	07:17 (14) 18:16 (14)	07:00 19:55	06:11 20:32	05:42 21:05	06:15 21:13	06:51 19:57	07:27 19:02	18:00 (14) 31	07:07 17:10	07:45 16:46	
6	08:02 17:00	07:39 17:40	06:55 18:17	07:18 (14) 18:17 (14)	06:58 19:57	06:10 20:34	05:41 21:05	06:17 21:13	06:53 19:56	07:28 19:00	36	07:08 17:34 (12)	07:46 16:46	
7	08:01 17:01	07:37 17:42	06:53 18:19	07:20 (14) 18:19 (14)	06:57 19:58	06:08 20:35	05:41 21:06	06:18 21:12	06:54 20:45	07:29 18:56	40	07:10 18:32 (12)	07:47 16:45	
8	08:01 17:02	07:36 17:43	07:51 18:20	08:22 (14) 18:59 (12)	06:55 19:59	06:07 20:36	05:41 21:07	06:19 21:12	06:55 20:43	07:31 18:54	39	07:11 18:31 (12)	07:48 16:45	
9	08:01 17:04	07:35 17:45	07:50 19:21	18:36 (12) 18:58 (12)	06:53 20:00	06:06 20:37	05:40 21:08	06:20 21:12	06:56 19:50	07:32 18:52	40	07:12 18:29 (12)	07:49 16:45	
10	08:01 17:05	07:33 17:46	07:48 19:23	18:36 (12) 18:56 (12)	06:51 20:02	06:04 20:38	05:50 21:08	06:21 21:11	06:57 19:48	07:33 18:51	37	07:14 18:27 (12)	07:50 16:45	
11	08:00 17:06	07:32 17:47	07:46 19:24	18:37 (12) 18:55 (12)	06:49 20:03	06:03 20:40	05:50 21:09	06:22 21:11	06:58 19:46	07:34 18:49	34	07:15 18:26 (12)	07:51 16:45	
12	08:00 17:07	07:31 17:49	07:44 19:25	18:40 (12) 18:53 (12)	06:48 20:04	06:02 20:41	05:51 21:09	06:23 21:10	07:00 19:45	07:36 18:47	30	07:17 18:24 (12)	07:52 16:45	
13	08:00 17:08	07:29 17:50	07:42 19:27	18:43 (12) 18:50 (12)	06:46 20:05	06:01 20:42	05:50 21:10	06:25 21:10	07:01 19:43	07:37 18:45	25	07:18 18:21 (12)	07:53 16:45	
14	07:59 17:09	07:28 17:52	07:41 19:28	07:41 20:07	06:44 20:43	05:59 21:10	05:40 21:09	06:26 20:35	07:02 19:41	07:38 18:44	21	07:19 18:19 (12)	07:53 16:45	
15	07:59 17:11	07:26 17:53	07:39 19:29	07:39 20:08	06:42 20:44	05:58 21:11	05:40 21:08	06:27 20:33	07:03 19:39	07:39 18:42	15	08:01 (14) 18:18 (12)	07:21 16:58	07:54 16:46
16	07:58 17:12	07:25 17:54	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:08	06:28 20:32	07:04 19:37	07:41 18:40	10	08:02 (14) 08:12 (14)	07:22 16:57	07:55 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:46	05:40 21:12	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:39	7	08:03 (14) 08:10 (14)	07:23 16:56	07:56 16:46
18	07:57 17:14	07:22 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	07:07 19:33	07:43 18:37	5	08:05 (14) 08:10 (14)	07:25 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:36 20:13	05:54 20:49	05:40 21:13	05:57 21:05	06:32 20:27	07:08 19:31	07:44 18:35	1	08:06 (14) 08:07 (14)	07:26 16:54	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:35	06:34 20:14	05:53 20:50	05:40 21:13	05:58 21:05	06:33 20:25	07:09 19:29	07:46 18:34		07:27 16:54	07:58 16:47	
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:51	05:40 21:13	05:59 21:04	06:34 20:24	07:10 19:28	07:47 18:32		07:28 16:53	07:58 16:48	
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	05:51 20:52	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30		07:30 16:52	07:59 16:48	
23	07:53 17:21	07:14 18:03	07:24 19:39	07:24 19:39	06:29 20:18	05:50 20:53	05:41 21:14	06:36 21:02	07:13 19:24	07:50 18:29		07:31 16:51	07:59 16:49	
24	07:52 17:22	07:12 18:04	07:22 19:40	07:22 19:40	06:27 20:19	05:49 20:54	05:41 21:14	06:02 21:01	06:37 19:22	07:14 18:27		07:32 16:51	08:00 16:49	
25	07:52 17:24	07:10 18:05	07:20 19:42	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:03 21:00	07:15 19:20	07:52 18:26		07:34 16:50	08:00 16:50	
26	07:51 17:25	07:09 18:07	07:30 19:43	07:18 19:43	06:24 20:21	05:48 20:56	05:41 21:14	06:04 20:59	07:16 19:18	07:54 18:24		07:35 16:49	08:00 16:51	
27	07:50 17:26	07:07 18:08	07:28 19:44	07:17 19:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 19:16	07:55 18:22		07:36 16:49	08:01 16:51	
28	07:49 17:28	07:05 18:09	07:26 19:45	07:15 19:45	06:21 20:24	05:46 20:58	05:42 21:14	06:07 20:57	06:42 19:14	07:18 18:21		07:37 16:48	08:01 16:52	
29	07:48 17:29		07:13 19:47	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13		07:38 16:48	08:01 16:53	
30	07:47 17:31		07:11 19:48	07:11 19:48	06:18 20:26	05:45 21:00	05:43 21:14	06:09 20:55	06:44 20:08	07:21 19:11		07:40 16:47	08:01 16:54	
31	07:46 17:32		07:09 19:49	07:09 19:49	05:44 21:01	05:44 21:01	06:10 20:54	06:46 20:06	08:00 18:17			08:02 16:54	08:02 16:54	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	440	289	276	
Total, worst case		72	363								440			
Sun reduction		0.59	0.59								0.63			
Oper. time red.		0.98	0.98								0.98			
Wind dir. red.		0.60	0.57								0.58			
Total reduction		0.35	0.33								0.35			
Total, real		25	119								156			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H323 - H323

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	07:44	16:49 (18)	07:04	07:07	06:17
	16:55	17:33	18	17:07 (18)	18:11	19:50
2	08:02	07:43	16:50 (18)	07:02	07:06	06:15
	16:56	17:35	18	17:08 (18)	18:12	19:52
3	08:02	07:42	16:51 (18)	07:00	07:04	06:14
	16:57	17:36	16	17:07 (18)	18:13	19:53
4	08:02	07:41	16:53 (18)	06:58	07:02	06:12
	16:58	17:38	13	17:06 (18)	18:15	19:54
5	08:02	07:40	16:54 (18)	06:57	07:00	06:11
	16:59	17:39	10	17:04 (18)	18:16	19:55
6	08:02	07:39	16:58 (18)	06:55	06:58	06:09
	17:00	17:40	3	17:01 (18)	18:17	19:57
7	08:01	07:37		06:53	06:56	06:08
	17:01	17:42		18:19	19:58	20:35
8	08:01	07:36		06:51	06:55	06:07
	17:02	17:43		18:20	19:59	20:36
9	08:01	07:35		06:50	06:53	06:06
	17:04	17:45		19:21	20:00	20:37
10	08:01	07:33		06:48	06:51	06:04
	17:05	17:46		19:23	20:02	20:38
11	08:00	07:32		06:46	06:49	06:03
	17:06	17:47		19:24	20:03	20:39
12	08:00	07:30		06:44	06:48	06:02
	17:07	17:49		19:25	20:04	20:41
13	08:00	07:29		06:42	06:46	06:01
	17:08	17:50		19:27	20:05	20:42
14	07:59	07:28		06:41	06:44	05:59
	17:09	17:52		19:28	20:07	20:43
15	07:59	07:26		06:42	06:45	05:58
	17:11	17:53		19:29	20:08	20:44
16	07:58	07:25		06:41	06:41	05:57
	17:12	17:54		19:30	20:09	20:45
17	07:57	07:23		06:39	06:39	05:56
	17:13	17:56		19:32	20:10	20:46
18	07:57	07:22		06:37	06:37	05:55
	17:14	17:57		19:33	20:11	20:47
19	07:56	07:20		06:36	06:36	05:54
	17:16	17:59		19:34	20:13	20:49
20	07:56	07:19		06:34	06:34	05:53
	17:17	18:00		19:35	20:14	20:50
21	07:55	16:50 (18)	07:17	06:32	06:32	05:52
	17:18	2	16:52 (18)	18:00	19:37	20:15
22	07:54	16:49 (18)	07:15	06:31	06:31	05:51
	17:20	4	16:53 (18)	18:01	19:38	20:16
23	07:53	16:48 (18)	07:14	06:29	06:29	05:50
	17:21	6	16:54 (18)	18:03	19:39	20:18
24	07:52	16:48 (18)	07:12	06:27	06:27	05:49
	17:22	8	16:56 (18)	18:04	19:40	20:19
25	07:52	16:48 (18)	07:10	06:26	06:26	05:49
	17:24	9	16:57 (18)	18:05	19:42	20:20
26	07:51	16:48 (18)	07:09	06:24	06:24	05:48
	17:25	11	16:59 (18)	18:07	19:43	20:21
27	07:50	16:48 (18)	07:07	06:23	06:23	05:47
	17:26	12	17:00 (18)	18:08	19:44	20:23
28	07:49	16:48 (18)	07:05	06:21	06:21	05:46
	17:28	14	17:02 (18)	18:09	19:45	20:24
29	07:48	16:48 (18)		06:20	06:20	05:46
	17:29	15	17:03 (18)		19:47	20:25
30	07:47	16:49 (18)		06:18	06:18	05:45
	17:31	16	17:05 (18)		19:48	20:26
31	07:46	16:49 (18)		06:17	06:17	05:44
	17:32	18	17:07 (18)		19:49	21:01
Potential sun hours	287	292	369	403	458	464
Total, worst case	115	78		131	157	1072
Sun reduction	0.57	0.59		0.61	0.65	0.70
Oper. time red.	0.98	0.98		0.98	0.98	0.98
Wind dir. red.	0.56	0.56		0.56	0.56	0.56
Total reduction	0.31	0.32		0.34	0.36	0.38
Total, real	36	25		44	56	412

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H323 - H323

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December					
1	05:44	06:08 (14)	06:11	06:47	07:09 (15)	07:22	07:02				07:41
	21:14	36 06:44 (14)	20:52	20:05	15 07:24 (15)	19:09	17:15				16:47
2	05:44	06:09 (14)	06:12	06:48	07:10 (15)	07:23	07:03				07:42
	21:14	36 06:45 (14)	20:51	20:03	14 07:24 (15)	19:07	17:14				16:47
3	05:45	06:09 (14)	06:13	06:49	07:11 (15)	07:24	07:04				07:43
	21:13	35 06:44 (14)	20:50	20:01	12 07:23 (15)	19:05	17:12				16:46
4	05:45	06:10 (14)	06:14	06:50	07:12 (15)	07:26	07:06				07:44
	21:13	34 06:44 (14)	20:49	19:59	11 07:23 (15)	19:03	17:11				16:46
5	05:46	06:10 (14)	06:15	06:51	07:13 (15)	07:27	07:07			16:27 (18)	07:45
	21:13	34 06:44 (14)	20:47	19:57	9 07:22 (15)	19:01	17:10	5		16:32 (18)	16:46
6	05:47	06:11 (14)	06:17	06:53	07:14 (15)	07:28	07:08			16:24 (18)	07:46
	21:13	33 06:44 (14)	20:46	19:56	7 07:21 (15)	19:00	17:08	11		16:35 (18)	16:45
7	05:47	06:12 (14)	06:18	06:54	07:15 (15)	07:29	07:10			16:22 (18)	07:47
	21:12	32 06:44 (14)	20:45	19:54	5 07:20 (15)	18:56	17:07	14		16:36 (18)	16:45
8	05:48	06:12 (14)	06:19	06:55	07:16 (15)	07:31	07:11			16:21 (18)	07:48
	21:12	31 06:43 (14)	20:43	19:52	2 07:18 (15)	18:54	17:06	16		16:37 (18)	16:45
9	05:49	06:13 (14)	06:20	06:56	07:17 (15)	07:32	07:12			16:21 (18)	07:49
	21:12	30 06:43 (14)	20:42	19:50		18:52	17:05	18		16:39 (18)	16:45
10	05:50	06:14 (14)	06:21	06:57	07:18 (15)	07:33	07:14			16:20 (18)	07:50
	21:11	29 06:43 (14)	20:40	19:48		18:51	17:04	18		16:38 (18)	16:45
11	05:50	06:15 (14)	06:22	06:58	07:19 (15)	07:34	07:15			16:20 (18)	07:51
	21:11	27 06:42 (14)	20:39	19:46		18:49	17:02	17		16:37 (18)	16:45
12	05:51	06:15 (14)	06:23	07:00	07:20 (15)	07:36	07:16			16:19 (18)	07:52
	21:10	26 06:41 (14)	20:38	19:44		18:47	17:01	17		16:36 (18)	16:45
13	05:52	06:16 (14)	06:25	07:01	07:21 (15)	07:37	07:18			16:20 (18)	07:53
	21:10	25 06:41 (14)	20:36	19:43		18:45	17:00	15		16:35 (18)	16:45
14	05:53	06:17 (14)	06:26	07:02	07:22 (15)	07:38	07:19			16:20 (18)	07:53
	21:09	23 06:40 (14)	20:35	19:41		18:44	16:59	14		16:34 (18)	16:45
15	05:54	06:18 (14)	06:27	07:03	07:23 (15)	07:39	07:21			16:21 (18)	07:54
	21:08	21 06:39 (14)	20:33	19:39		18:42	16:58	12		16:33 (18)	16:46
16	05:55	06:19 (14)	06:28	07:04	07:24 (15)	07:41	07:22			16:21 (18)	07:55
	21:08	20 06:39 (14)	20:31	19:37		18:40	16:57	11		16:32 (18)	16:46
17	05:56	06:20 (14)	06:29	07:05	07:25 (15)	07:42	07:23			16:21 (18)	07:56
	21:07	17 06:37 (14)	20:30	19:35		18:39	16:56	9		16:30 (18)	16:46
18	05:56	06:20 (14)	06:30	07:07	07:26 (15)	07:43	07:24			16:22 (18)	07:56
	21:06	15 06:35 (14)	20:28	19:33		18:37	16:55	8		16:30 (18)	16:47
19	05:57	06:21 (14)	06:32	07:08	07:27 (15)	07:44	07:26			16:22 (18)	07:57
	21:05	12 06:33 (14)	20:27	19:31		18:35	16:54	6		16:28 (18)	16:47
20	05:58	06:22 (14)	06:33	07:09	07:28 (15)	07:46	07:27			16:24 (18)	07:58
	21:05	9 06:31 (14)	20:25	19:29		18:34	16:54	4		16:28 (18)	16:47
21	05:59	06:23 (14)	06:34	07:10	07:29 (15)	07:47	07:28			16:25 (18)	07:58
	21:04		20:23	19:28		18:32	16:53	2		16:27 (18)	16:48
22	06:00	06:24 (14)	06:35	07:11	07:30 (15)	07:48	07:30				07:59
	21:03		20:22	19:26		18:30	16:52				16:48
23	06:01	06:25 (14)	06:36	07:12	07:31 (15)	07:50	07:31				07:59
	21:02		20:20	19:24		18:29	16:51				16:49
24	06:02	06:26 (14)	06:37	07:14	07:32 (15)	07:51	07:32				08:00
	21:01		20:18	19:22		18:27	16:51				16:49
25	06:03	06:27 (14)	06:39	07:15	07:33 (15)	07:52	07:33				08:00
	21:00		20:17	19:20		18:26	16:50				16:50
26	06:04	06:28 (14)	06:40	07:16	07:34 (15)	07:54	07:35				08:00
	20:59		20:15	19:18		18:24	16:49				16:51
27	06:06	06:29 (14)	06:41	07:13 (15)	07:17	07:55	07:36				08:01
	20:58		20:13	3 07:16 (15)	19:16	18:22	16:49				16:51
28	06:07	06:30 (14)	06:42	07:09 (15)	07:18	07:56	07:37				08:01
	20:57		20:12	11 07:20 (15)	19:14	18:21	16:48				16:52
29	06:08	06:31 (14)	06:43	07:06 (15)	07:20	07:58	07:38				08:01
	20:56		20:10	15 07:21 (15)	19:13	18:19	16:48				16:53
30	06:09	06:32 (14)	06:44	07:06 (15)	07:21	07:59	07:40				08:01
	20:55		20:08	16 07:22 (15)	19:11	18:18	16:47				16:54
31	06:10	06:33 (14)	06:46	07:07 (15)		08:00					08:01
	20:54		20:06	15 07:22 (15)		18:17					16:54
Potential sun hours	471	435		377		341	289				276
Total, worst case	525		60	75			197				
Sun reduction	0.76		0.74	0.69			0.50				
Oper. time red.	0.98		0.98	0.98			0.98				
Wind dir. red.	0.56		0.56	0.56			0.56				
Total reduction	0.42		0.41	0.38			0.27				
Total, real	219		24	28			54				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

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US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H324 - H324

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:55	07:44 17:33	07:04 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09		16:27 (14) 16:47
2	08:02 16:56	07:43 17:35	07:02 18:12	07:05 19:52	06:15 20:29	05:43 21:02	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	23 20	16:29 (14) 16:46 16:29 (14) 16:43
3	08:02 16:57	07:42 17:36	17:09 (14) 17:11 (14)	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	20 18	16:29 (14) 16:43 16:47 (14) 16:46
4	08:02 16:58	07:41 17:37	17:06 (14) 17:12 (14)	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:49	06:50 19:59	18 15	16:31 (14) 16:44 (14) 16:46 (14) 16:45
5	08:02 16:59	07:40 17:39	17:03 (14) 17:13 (14)	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:05	05:46 21:13	06:15 20:47	06:51 19:57	17 13	16:32 (14) 16:45 (14) 16:46 (14) 16:46
6	08:01 17:00	07:38 17:40	17:02 (14) 17:15 (14)	06:55 18:17	06:58 19:57	06:09 20:33	05:41 21:05	05:47 21:13	06:17 20:46	06:53 19:55	10 10	16:34 (14) 16:45 (14) 16:45 (14) 16:45
7	08:01 17:01	07:37 17:42	17:01 (14) 17:17 (14)	06:53 18:19	06:56 19:58	06:08 20:35	05:41 21:06	05:47 21:12	06:18 20:45	06:54 19:54	7 6	16:36 (14) 16:47 (14) 16:45 (14) 16:45
8	08:01 17:02	07:36 17:43	16:59 (14) 17:18 (14)	07:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	7 7	16:31 (14) 16:45 (14) 16:45 (14) 16:45
9	08:01 17:03	07:35 17:45	16:59 (14) 17:20 (14)	07:50 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:12	06:20 20:42	06:56 19:50	7 7	16:32 (14) 16:46 (14) 16:45 (14) 16:45
10	08:01 17:05	07:33 17:46	16:59 (14) 17:22 (14)	07:48 19:23	06:51 20:02	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	7 7	16:33 (14) 16:47 (14) 16:45 (14) 16:45
11	08:00 17:06	07:32 17:47	16:57 (14) 17:23 (14)	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:09	05:50 21:11	06:22 19:46	06:58 18:49	7 7	16:34 (14) 16:48 (14) 16:45 (14) 16:45
12	08:00 17:07	07:30 17:49	16:58 (14) 17:25 (14)	07:44 19:25	06:48 20:04	06:02 20:41	05:40 21:09	05:51 21:10	06:23 20:37	07:00 19:44	7 7	16:35 (14) 16:48 (14) 16:45 (14) 16:45
13	08:00 17:08	07:29 17:50	16:57 (14) 17:26 (14)	07:42 19:26	06:46 20:05	06:00 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	7 7	16:36 (14) 16:49 (14) 16:45 (14) 16:45
14	07:59 17:09	07:28 17:52	16:57 (14) 17:28 (14)	07:41 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	7 7	16:37 (14) 16:50 (14) 16:45 (14) 16:45
15	07:59 17:10	07:26 17:53	16:57 (14) 17:28 (14)	07:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	7 7	16:38 (14) 16:51 (14) 16:45 (14) 16:45
16	07:58 17:12	07:25 17:54	16:57 (14) 17:29 (14)	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:08	06:28 20:31	07:04 19:37	7 7	16:39 (14) 16:52 (14) 16:45 (14) 16:45
17	07:57 17:13	07:23 17:56	16:57 (14) 17:28 (14)	07:35 19:32	06:39 20:10	05:56 20:46	05:40 21:12	05:55 21:07	06:29 20:30	07:05 19:35	7 13	16:40 (14) 16:53 (14) 16:45 (14) 16:45
18	07:57 17:14	07:22 17:57	16:58 (14) 17:28 (14)	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	07:07 19:33	7 18	16:41 (14) 16:54 (14) 16:45 (14) 16:45
19	07:56 17:16	07:20 17:59	16:58 (14) 17:27 (14)	07:31 19:34	06:35 20:13	05:54 20:48	05:40 21:12	05:57 21:05	06:32 20:27	07:08 19:31	7 21	16:42 (14) 16:55 (14) 16:45 (14) 16:45
20	07:55 17:17	07:18 18:00	16:58 (14) 17:26 (14)	07:30 19:35	06:34 20:14	05:53 20:50	05:40 21:13	05:58 21:05	06:33 20:25	07:09 19:29	7 24	16:43 (14) 16:56 (14) 16:45 (14) 16:45
21	07:55 17:18	07:17 18:00	17:00 (14) 17:25 (14)	07:28 19:37	06:32 20:15	05:52 20:51	05:40 21:13	05:59 21:04	06:34 20:23	07:10 19:28	7 26	16:44 (14) 16:57 (14) 16:45 (14) 16:45
22	07:54 17:20	07:15 18:01	17:01 (14) 17:24 (14)	07:26 19:38	06:30 20:16	05:51 20:52	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:26	7 28	16:45 (14) 16:58 (14) 16:45 (14) 16:45
23	07:53 17:21	07:14 18:03	17:02 (14) 17:22 (14)	07:24 19:39	06:29 20:18	05:50 20:53	05:40 21:13	06:01 21:02	06:36 20:20	07:12 19:24	7 30	16:46 (14) 16:59 (14) 16:45 (14) 16:45
24	07:52 17:22	07:12 18:04	17:04 (14) 17:20 (14)	07:22 19:40	06:27 20:19	05:49 20:54	05:41 21:14	06:02 21:01	06:37 20:18	07:14 19:22	7 31	16:47 (14) 16:60 (14) 16:45 (14) 16:45
25	07:51 17:24	07:10 18:05	17:07 (14) 17:17 (14)	07:20 19:42	06:26 20:20	05:48 20:55	05:41 21:14	06:03 21:00	06:39 20:17	07:15 19:20	7 30	16:48 (14) 16:61 (14) 16:45 (14) 16:45
26	07:51 17:25	07:09 18:07	07:18 19:43	07:18 20:21	06:24 20:21	05:48 20:56	05:41 21:14	06:04 20:59	06:40 20:15	07:16 19:18	7 31	16:49 (14) 16:62 (14) 16:45 (14) 16:45
27	07:50 17:26	07:07 18:08	07:17 19:44	07:17 20:22	06:23 20:22	05:47 20:57	05:42 21:14	06:05 20:58	06:41 20:13	07:17 19:16	7 32	16:50 (14) 16:63 (14) 16:45 (14) 16:45
28	07:49 17:28	07:05 18:09	07:15 19:45	07:15 20:24	06:21 20:24	05:46 20:58	05:42 21:14	06:07 20:57	06:42 20:12	07:18 19:14	7 30	16:51 (14) 16:64 (14) 16:45 (14) 16:45
29	07:48 17:29	07:04 17:29	07:13 19:47	07:13 20:25	06:19 20:59	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	7 28	16:52 (14) 16:65 (14) 16:45 (14) 16:45
30	07:47 17:30	07:03 19:48	07:11 19:48	07:11 20:26	06:18 20:26	05:45 21:00	05:43 21:14	06:09 20:55	06:44 20:08	07:21 19:11	7 27	16:53 (14) 16:66 (14) 16:45 (14) 16:45
31	07:46 17:32	07:02 19:49	07:09 19:49	07:09 21:00	05:44 21:00	05:44 20:53	06:10 20:53	06:46 20:06	08:00 18:16	25 17:52 (14)	7 28	16:54 (14) 16:67 (14) 16:45 (14) 16:45
Potential sun hours	287	292	369	403	458	464	471	435	377	341	394	276
Total, worst case		498									105	
Sun reduction		0.59									0.50	
Oper. time red.		0.98									0.98	
Wind dir. red.		0.56									0.56	
Total reduction		0.32									0.27	
Total, real		160									29	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H325 - H325

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including sun rise/set times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining shadow calculation parameters: Day in month, Sun rise/set times, Minutes with flicker, First/Last time with flicker, and WTG causing flicker first/last time.

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H326 - H326

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H327 - H327

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H328 - H328

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H330 - H330

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:13	16:46
3	08:01	07:42	07:00	07:03	06:13	05:42	05:44	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:42	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:04	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:00	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:25	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:11	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:07	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:32	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:47	05:41	06:04	06:39	07:16	07:53	07:34	08:00
	17:25	18:06	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:48	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H331 - H331

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:46	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:13	16:46
3	08:01	07:42	07:00	07:03	06:13	05:42	05:44	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:41	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:06	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:04	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:00	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:25	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:11	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:07	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:32	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:47	05:41	06:04	06:39	07:16	07:53	07:34	08:00
	17:25	18:06	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:48	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H334 - H334

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:13	16:46
3	08:02	07:42	07:00	07:03	06:13	05:42	05:44	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:56	07:00	06:11	05:41	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:06	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:04	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:00	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:25	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:11	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:07	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:32	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
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	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:47	05:41	06:04	06:39	07:16	07:53	07:34	08:00
	17:25	18:06	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:48	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H335 - H335

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H336 - H336

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H337 - H337

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:47		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H338 - H338

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H339 - H339

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:02	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H340 - H340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H341 - H341

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H342 - H342

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	20:39 (3)	06:11	06:47	07:22	07:02	07:41	
	16:55	17:33	18:11	19:50	20:28	21:01	21:14	8	20:47 (3)	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	20:40 (3)	06:12	06:48	07:23	07:03	07:42	
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	7	20:47 (3)	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	20:36 (3)	05:45	20:39 (3)	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	1	20:37 (3)	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	20:36 (3)	05:45	20:40 (3)	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	2	20:38 (3)	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	20:35 (3)	05:46	20:40 (3)	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	3	20:38 (3)	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	20:35 (3)	05:47	20:41 (3)	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	4	20:39 (3)	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	20:35 (3)	05:47	20:42 (3)	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	5	20:40 (3)	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	20:34 (3)	05:48	20:42 (3)	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	6	20:40 (3)	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	20:34 (3)	05:49	20:43 (3)	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	7	20:41 (3)	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	20:35 (3)	05:50	20:44 (3)	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	7	20:42 (3)	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	20:35 (3)	05:50	20:42 (3)	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	7	20:42 (3)	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	20:35 (3)	05:51	20:43 (3)	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	8	20:43 (3)	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	20:35 (3)	05:52	20:44 (3)	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	8	20:43 (3)	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	20:35 (3)	05:53	20:45 (3)	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:11	9	20:44 (3)	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	20:35 (3)	05:54	20:46 (3)	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	9	20:44 (3)	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	20:35 (3)	05:55	20:47 (3)	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	10	20:45 (3)	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	20:35 (3)	05:55	20:48 (3)	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	10	20:45 (3)	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	20:35 (3)	05:56	20:49 (3)	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	10	20:45 (3)	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	20:35 (3)	05:57	20:50 (3)	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	11	20:46 (3)	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	20:36 (3)	05:58	20:51 (3)	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	10	20:46 (3)	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	20:36 (3)	05:59	20:52 (3)	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	10	20:46 (3)	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	20:36 (3)	06:00	20:53 (3)	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:16	20:52	21:13	10	20:46 (3)	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	20:37 (3)	06:01	20:54 (3)	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	10	20:47 (3)	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	20:36 (3)	06:02	20:55 (3)	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	10	20:46 (3)	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	20:36 (3)	06:03	20:56 (3)	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	10	20:46 (3)	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	20:37 (3)	06:04	20:57 (3)	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	10	20:47 (3)	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	20:37 (3)	06:05	20:58 (3)	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	10	20:47 (3)	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	20:38 (3)	06:07	20:59 (3)	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	9	20:47 (3)	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48	07:13	07:23	06:20	05:46	05:43	20:38 (3)	06:08	20:59 (3)	06:43	07:20	07:58	07:38	08:01
	17:29	18:10	19:46	20:25	20:59	21:14	9	20:47 (3)	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47	07:11	07:21	06:18	05:45	05:43	20:38 (3)	06:09	20:59 (3)	06:44	07:21	07:59	07:40	08:01
	17:30	18:11	19:47	20:26	21:00	21:14	8	20:46 (3)	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46	07:10	07:20	06:17	05:44	05:40	20:39 (3)	06:10	20:59 (3)	06:46	07:22	07:59	07:40	08:01
	17:32	18:13	19:49	20:28	21:01	21:15	7	20:54	20:54	20:06	18:17	16:48	16:54	16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276		
Total, worst case						223		45						
Sun reduction						0.70		0.76						
Oper. time red.						0.98		0.98						
Wind dir. red.						0.68		0.68						
Total reduction						0.47		0.51						
Total, real						104		23						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H343 - H343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June						
1	08:02	09:13 (11)	07:45	16:58 (10)	07:04	07:07	19:20 (9)	06:17	05:44			
	16:56	34	09:47 (11)	17:33	10	17:08 (10)	18:11	19:51	9	19:29 (9)	20:28	21:02
2	08:02	09:14 (11)	07:43	16:57 (10)	07:02	07:06	19:18 (9)	06:15	05:43			
	16:56	33	09:47 (11)	17:35	12	17:09 (10)	18:12	19:52	12	19:30 (9)	20:29	21:02
3	08:02	09:15 (11)	07:42	16:57 (10)	07:00	07:04	19:17 (9)	06:14	05:43			
	16:57	32	09:47 (11)	17:36	14	17:11 (10)	18:14	19:53	15	19:32 (9)	20:30	21:03
4	08:02	09:16 (11)	07:41	16:57 (10)	06:59	07:02	19:16 (9)	06:12	05:42			
	16:58	31	09:47 (11)	17:38	15	17:12 (10)	18:15	19:54	17	19:33 (9)	20:31	21:04
5	08:02	09:18 (11)	07:40	16:58 (10)	06:57	07:00	19:15 (9)	06:11	05:42			
	16:59	29	09:47 (11)	17:39	16	17:14 (10)	18:16	19:55	19	19:34 (9)	20:32	21:05
6	08:02	09:19 (11)	07:39	16:58 (10)	06:55	06:58	19:14 (9)	06:10	05:41			
	17:00	27	09:46 (11)	17:40	17	17:15 (10)	18:18	19:57	21	19:35 (9)	20:34	21:06
7	08:02	09:19 (11)	07:37	16:59 (10)	06:53	06:57	19:14 (9)	06:08	05:41			
	17:01	26	09:45 (11)	17:42	17	17:16 (10)	18:19	19:58	23	19:37 (9)	20:35	21:06
8	08:01	09:21 (11)	07:36	17:00 (10)	07:52	06:55	19:14 (9)	06:07	05:41			
	17:02	24	09:45 (11)	17:43	16	17:16 (10)	18:20	19:59	23	19:37 (9)	20:36	21:07
9	08:01	09:23 (11)	07:35	17:01 (10)	07:50	06:53	19:14 (9)	06:06	05:41			
	17:04	21	09:44 (11)	17:45	13	17:14 (10)	19:21	20:00	24	19:38 (9)	20:37	21:08
10	08:01	09:24 (11)	07:33	17:03 (10)	07:48	06:51	19:14 (9)	06:04	05:40			
	17:05	19	09:43 (11)	17:46	10	17:13 (10)	19:23	20:02	23	19:37 (9)	20:38	21:08
11	08:00	09:27 (11)	07:32	07:46	07:46	06:49	19:15 (9)	06:03	05:40			
	17:06	15	09:42 (11)	17:48	19:24	20:03	22	19:37 (9)	20:40	21:09		
12	08:00	09:31 (11)	07:31	07:44	07:44	06:48	19:15 (9)	06:02	05:40			
	17:07	8	09:39 (11)	17:49	19:25	20:04	20	19:35 (9)	20:41	21:10		
13	08:00	07:29	07:43	07:43	07:43	06:46	19:16 (9)	06:01	05:40			
	17:08	07:50	19:27	20:05	17	19:33 (9)	20:42	21:10				
14	07:59	07:28	07:41	06:44	19:18 (9)	05:59	05:40					
	17:09	17:52	19:28	20:07	13	19:31 (9)	20:43	21:11				
15	07:59	07:26	07:39	06:42	19:22 (9)	05:58	05:40					
	17:11	17:53	19:29	20:08	6	19:28 (9)	20:44	21:11				
16	07:58	07:25	07:37	06:41	05:57	05:40						
	17:12	17:55	19:30	20:09	20:45	21:12						
17	07:58	07:23	07:35	06:39	05:56	05:40						
	17:13	17:56	19:32	20:10	20:46	21:12						
18	07:57	07:22	07:33	06:37	05:55	05:40						
	17:14	17:57	19:33	20:12	20:48	21:12						
19	07:56	07:20	07:32	06:36	05:54	05:40						
	17:16	17:59	19:34	20:13	20:49	21:13						
20	07:56	07:19	07:30	06:34	05:53	05:40						
	17:17	18:00	19:36	20:14	20:50	21:13						
21	07:55	07:17	07:28	06:32	05:52	05:40						
	17:18	18:00	19:37	20:15	20:51	21:13						
22	07:54	07:15	07:26	06:31	05:51	05:40						
	17:20	18:01	19:38	20:17	20:52	21:13						
23	07:53	07:14	07:24	06:29	05:50	05:41						
	17:21	18:03	19:39	20:18	20:53	21:14						
24	07:53	07:12	07:22	06:27	05:49	05:41						
	17:22	18:04	19:41	20:19	20:54	21:14						
25	07:52	07:11	07:20	06:26	05:49	05:41						
	17:24	18:06	19:42	20:20	20:55	21:14						
26	07:51	07:09	07:19	06:24	05:48	05:41						
	17:25	18:07	19:43	20:21	20:56	21:14						
27	07:50	07:07	07:17	06:23	05:47	05:42						
	17:26	18:08	19:44	20:23	20:57	21:14						
28	07:49	17:00 (10)	07:06	07:15	06:21	05:46	05:42					
	17:28	2	17:02 (10)	18:10	19:46	20:24	20:58	21:14				
29	07:48	16:59 (10)	07:13	07:13	06:20	05:46	05:43					
	17:29	4	17:03 (10)	19:47	20:25	20:59	21:14					
30	07:47	16:58 (10)	07:11	07:11	19:25 (9)	06:18	05:45	05:43				
	17:31	7	17:05 (10)	19:48	1	19:26 (9)	20:26	21:00	21:14			
31	07:46	16:58 (10)	07:09	07:09	19:21 (9)	05:44	05:44					
	17:32	8	17:06 (10)	19:49	6	19:27 (9)	21:01	21:01				
Potential sun hours	287	292	369	403	458	465						
Total, worst case	320	140	7	264								
Sun reduction	0.57	0.59	0.59	0.61								
Oper. time red.	0.98	0.98	0.98	0.98								
Wind dir. red.	0.70	0.56	0.61	0.61								
Total reduction	0.39	0.33	0.35	0.37								
Total, real	126	46	2	96								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H343 - H343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	19:14 (9) 19:36 (9)	07:22 19:09	07:02 16:31 (10)
2	05:44 21:14	06:12 20:51	06:48 20:03	19:13 (9) 19:36 (9)	07:23 19:07	07:03 16:30 (10)
3	05:45 21:14	06:13 20:50	06:49 20:01	19:12 (9) 19:36 (9)	07:25 19:05	07:04 16:29 (10)
4	05:45 21:13	06:14 20:49	06:50 19:59	19:11 (9) 19:35 (9)	07:26 19:03	07:06 16:29 (10)
5	05:46 21:13	06:16 20:47	06:52 19:57	19:10 (9) 19:33 (9)	07:27 19:02	07:07 16:28 (10)
6	05:47 21:13	06:17 20:46	06:53 19:56	19:10 (9) 19:31 (9)	07:28 19:00	07:09 16:28 (10)
7	05:47 21:13	06:18 20:45	06:54 19:54	19:10 (9) 19:29 (9)	07:29 18:56	07:10 16:27 (10)
8	05:48 21:12	06:19 20:43	06:55 19:52	19:11 (9) 19:28 (9)	07:31 18:54	07:11 16:28 (10)
9	05:49 21:12	06:20 20:42	06:56 19:50	19:11 (9) 19:26 (9)	07:32 18:53	07:13 16:28 (10)
10	05:50 21:11	06:21 20:41	06:57 19:48	19:11 (9) 19:24 (9)	07:33 18:51	07:14 16:29 (10)
11	05:50 21:11	06:22 20:39	06:59 19:46	19:12 (9) 19:22 (9)	07:34 18:49	07:15 16:29 (10)
12	05:51 21:10	06:24 20:38	07:00 19:45	19:13 (9) 19:20 (9)	07:36 18:47	07:17 16:29 (10)
13	05:52 21:10	06:25 20:36	07:01 19:43	19:16 (9) 19:18 (9)	07:37 18:45	07:18 16:31 (10)
14	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:19 16:59	07:54 16:32 (10)
15	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:21 16:58	07:54 16:46
16	05:55 21:08	06:28 20:32	07:04 19:37	07:41 18:40	07:22 16:57	07:55 16:46
17	05:56 21:07	06:29 20:30	07:06 19:35	07:42 18:39	07:23 16:56	07:56 16:46
18	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:25 16:55	07:56 16:47
19	05:57 21:06	06:32 20:27	07:08 19:31	07:45 18:35	07:26 16:55	07:57 16:47
20	05:58 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:47
21	05:59 21:04	06:34 20:24	07:10 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:30 16:52	07:59 16:48
23	06:01 21:02	06:36 20:20	07:13 19:24	07:50 18:29	07:31 16:51	07:59 16:49
24	06:02 21:01	06:38 20:19	07:14 19:22	07:51 18:27	07:32 16:51	08:00 16:49
25	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:34 16:50	08:00 16:50
26	06:05 20:59	06:40 20:15	07:16 19:18	07:54 18:24	07:35 16:49	08:00 16:51
27	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49	08:01 16:51
28	06:07 20:57	06:42 20:12	19:22 (9) 19:29 (9)	07:19 19:15	07:37 18:21	08:01 16:52
29	06:08 20:56	06:43 20:10	19:18 (9) 19:32 (9)	07:20 19:13	07:38 18:20	08:01 16:53
30	06:09 20:55	06:45 20:08	19:16 (9) 19:33 (9)	07:21 19:11	07:39 18:18	08:02 16:54
31	06:10 20:54	06:46 20:06	19:15 (9) 19:35 (9)	08:00 18:17	17:35 (10) 17:39 (10)	08:02 16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case		58	220	4	169	1011
Sun reduction		0.74	0.69	0.63	0.50	0.49
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.61	0.61	0.56	0.57	0.71
Total reduction		0.44	0.41	0.35	0.28	0.34
Total, real		26	91	1	47	347

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H345 - H345

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:02	07:45	08:07 (9)	07:04	08:04 (9)	07:08	07:28 (1)	06:17	19:47 (5)	05:44
	16:56	17:33	21 08:28 (9)	18:11	17 08:21 (9)	19:51	18 07:46 (1)	20:28	18 20:05 (5)	21:02
2	08:02	07:44	08:05 (9)	07:02	08:10 (9)	07:06	07:26 (1)	06:15	19:46 (5)	05:43
	16:56	17:35	24 08:29 (9)	18:12	5 08:15 (9)	19:52	18 07:44 (1)	20:29	19 20:05 (5)	21:03
3	08:02	07:42	08:04 (9)	07:00		07:04	07:24 (1)	06:14	19:46 (5)	05:43
	16:57	17:36	26 08:30 (9)	18:14		19:53	19 07:43 (1)	20:30	21 20:07 (5)	21:03
4	08:02	07:41	08:03 (9)	06:59	17:45 (7)	07:02	07:24 (1)	06:12	19:46 (5)	05:42
	16:58	17:38	29 08:32 (9)	18:15	8 17:53 (7)	19:54	17 07:41 (1)	20:31	22 20:08 (5)	21:04
5	08:02	07:40	08:02 (9)	06:57	17:41 (7)	07:00	07:25 (1)	06:11	19:45 (5)	05:42
	16:59	17:39	31 08:33 (9)	18:16	13 17:54 (7)	19:56	14 07:39 (1)	20:33	24 20:09 (5)	21:05
6	08:02	07:39	08:00 (9)	06:55	17:39 (7)	06:58	07:28 (1)	06:10	19:45 (5)	05:42
	17:00	17:41	33 08:33 (9)	18:18	17 17:56 (7)	19:57	9 07:37 (1)	20:34	24 20:09 (5)	21:06
7	08:02	07:37	07:59 (9)	06:53	17:37 (7)	06:57		06:08	19:46 (5)	05:41
	17:01	17:42	35 08:34 (9)	18:19	21 17:58 (7)	19:58		20:35	23 20:09 (5)	21:06
8	08:01	07:36	07:58 (9)	07:52	18:35 (7)	06:55		06:07	19:45 (5)	05:41
	17:03	17:43	37 08:35 (9)	18:20	24 18:59 (7)	19:59		20:36	23 20:08 (5)	21:07
9	08:01	07:35	07:56 (9)	07:50	18:34 (7)	06:53		06:06	19:46 (5)	05:41
	17:04	17:45	39 08:35 (9)	19:22	26 19:00 (7)	20:01		20:37	22 20:08 (5)	21:08
10	08:01	07:33	07:55 (9)	07:48	18:33 (7)	06:51		06:04	19:47 (5)	05:40
	17:05	17:46	41 08:36 (9)	19:23	28 19:01 (7)	20:02		20:39	20 20:07 (5)	21:08
11	08:01	07:32	07:53 (9)	07:46	18:33 (7)	06:50		06:03	19:48 (5)	05:40
	17:06	17:48	43 08:36 (9)	19:24	30 19:03 (7)	20:03		20:40	19 20:07 (5)	21:09
12	08:00	07:31	07:52 (9)	07:44	18:32 (7)	06:48		06:02	19:49 (5)	05:40
	17:07	17:49	45 08:37 (9)	19:25	31 19:03 (7)	20:04		20:41	17 20:06 (5)	21:10
13	08:00	07:29	07:52 (9)	07:43	18:32 (7)	06:46		06:01	19:50 (5)	05:40
	17:08	17:50	46 08:38 (9)	19:27	30 19:02 (7)	20:05		20:42	15 20:05 (5)	21:10
14	07:59	07:28	07:51 (9)	07:41	18:31 (7)	06:44		06:00	19:51 (5)	05:40
	17:09	17:52	46 08:37 (9)	19:28	31 19:02 (7)	20:07		20:43	11 20:02 (5)	21:11
15	07:59	07:26	07:51 (9)	07:39	18:31 (7)	06:43		05:58	19:53 (5)	05:40
	17:11	17:53	46 08:37 (9)	19:29	30 19:01 (7)	20:08		20:44	7 20:00 (5)	21:11
16	07:58	07:25	07:52 (9)	07:37	18:31 (7)	06:41		05:57		05:40
	17:12	17:55	45 08:37 (9)	19:31	30 19:01 (7)	20:09		20:45		21:12
17	07:58	07:23	07:51 (9)	07:35	18:32 (7)	06:39		05:56		05:40
	17:13	17:56	45 08:36 (9)	19:32	29 19:01 (7)	20:10		20:47		21:12
18	07:57	07:22	07:52 (9)	07:33	18:32 (7)	06:37		05:55		05:40
	17:14	17:57	45 08:37 (9)	19:33	28 19:00 (7)	20:12		20:48		21:12
19	07:56	07:20	07:52 (9)	07:32	18:33 (7)	06:36		05:54		05:40
	17:16	17:59	44 08:36 (9)	19:34	25 18:58 (7)	20:13		20:49		21:13
20	07:56	07:19	07:53 (9)	07:30	18:34 (7)	06:34		05:53		05:40
	17:17	18:00	43 08:36 (9)	19:36	22 18:56 (7)	20:14		20:50		21:13
21	07:55	07:17	07:53 (9)	07:28	18:35 (7)	06:32		05:52		05:40
	17:18	18:00	42 08:35 (9)	19:37	19 18:54 (7)	20:15		20:51		21:13
22	07:54	07:16	07:53 (9)	07:26	18:37 (7)	06:31		05:51		05:40
	17:20	18:01	40 08:33 (9)	19:38	15 18:52 (7)	20:17		20:52		21:14
23	07:53	07:14	07:55 (9)	07:24	18:41 (7)	06:29		05:50		05:41
	17:21	18:03	38 08:33 (9)	19:39	6 18:47 (7)	20:18		20:53		21:14
24	07:53	07:12	07:55 (9)	07:22	07:42 (1)	06:27		05:50		05:41
	17:22	18:04	37 08:32 (9)	19:41	2 07:44 (1)	20:19		20:54		21:14
25	07:52	07:11	07:56 (9)	07:20	07:41 (1)	06:26		05:49		05:41
	17:24	18:06	34 08:30 (9)	19:42	5 07:46 (1)	20:20		20:55		21:14
26	07:51	07:09	07:58 (9)	07:19	07:39 (1)	06:24	19:53 (5)	05:48		05:42
	17:25	18:07	31 08:29 (9)	19:43	7 07:46 (1)	20:22	5 19:58 (5)	20:56		21:14
27	07:50	07:07	07:59 (9)	07:17	07:37 (1)	06:23	19:51 (5)	05:47		05:42
	17:27	18:08	28 08:27 (9)	19:44	10 07:47 (1)	20:23	9 20:00 (5)	20:57		21:14
28	07:49	08:11 (9)	07:06	07:15	07:35 (1)	06:21	19:49 (5)	05:46		05:42
	17:28	6 08:17 (9)	18:10	23 08:24 (9)	19:46	12 07:47 (1)	20:24	12 20:01 (5)	20:58	21:14
29	07:48	08:10 (9)		07:13	07:33 (1)	06:20	19:48 (5)	05:46		05:43
	17:29	11 08:21 (9)		19:47	13 07:46 (1)	20:25	14 20:02 (5)	20:59		21:14
30	07:47	08:09 (9)		07:11	07:31 (1)	06:18	19:47 (5)	05:45		05:43
	17:31	15 08:24 (9)		19:48	15 07:46 (1)	20:26	16 20:03 (5)	21:00		21:14
31	07:46	08:08 (9)		07:09	07:29 (1)			05:44		
	17:32	18 08:26 (9)		19:49	16 07:45 (1)			21:01		
Potential sun hours	287	292	369	403	458	465				
Total, worst case	50	1037	565	151	285					
Sun reduction	0.57	0.59	0.59	0.61	0.65					
Oper. time red.	0.98	0.98	0.98	0.98	0.98					
Wind dir. red.	0.67	0.67	0.56	0.60	0.63					
Total reduction	0.37	0.39	0.32	0.36	0.40					
Total, real	19	400	182	54	114					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H345 - H345

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December				
1	05:44	06:11	19:59 (5)	06:47	07:22	18:11 (7)	07:02	07:25 (9)	07:41	
	21:14	20:53	18 20:17 (5)	20:05	19:09	30 18:41 (7)	17:15	41 08:06 (9)	16:47	
2	05:44	06:12	19:58 (5)	06:48	07:23	18:10 (7)	07:03	07:26 (9)	07:42	
	21:14	20:51	19 20:17 (5)	20:03	19:07	31 18:41 (7)	17:14	39 08:05 (9)	16:47	
3	05:45	06:13	19:57 (5)	06:49	07:25	18:11 (7)	07:05	07:27 (9)	07:43	
	21:14	20:50	21 20:18 (5)	20:01	19:05	29 18:40 (7)	17:13	37 08:04 (9)	16:46	
4	05:46	06:14	19:56 (5)	06:50	07:26	18:11 (7)	07:06	07:29 (9)	07:44	
	21:14	20:49	22 20:18 (5)	19:59	19:03	27 18:38 (7)	17:11	35 08:04 (9)	16:46	
5	05:46	06:16	19:56 (5)	06:52	07:27	18:12 (7)	07:07	07:30 (9)	07:45	
	21:13	20:48	23 20:19 (5)	19:58	19:02	24 18:36 (7)	17:10	33 08:03 (9)	16:46	
6	05:47	06:17	19:55 (5)	06:53	07:28	18:12 (7)	07:09	07:32 (9)	07:46	
	21:13	20:46	24 20:19 (5)	19:56	8 07:32 (1)	19:00	22 18:34 (7)	17:09	31 08:03 (9)	16:46
7	05:48	06:18	19:55 (5)	06:54	07:20 (1)	07:30	18:14 (7)	07:10	07:33 (9)	07:47
	21:13	20:45	24 20:19 (5)	19:54	14 07:34 (1)	18:56	19 18:33 (7)	17:07	28 08:01 (9)	16:45
8	05:48	06:19	19:54 (5)	06:55	07:19 (1)	07:31	18:15 (7)	07:11	07:35 (9)	07:48
	21:12	20:43	24 20:18 (5)	19:52	17 07:36 (1)	18:54	16 18:31 (7)	17:06	26 08:01 (9)	16:45
9	05:49	06:20	19:54 (5)	06:56	07:18 (1)	07:32	18:17 (7)	07:13	07:36 (9)	07:49
	21:12	20:42	22 20:16 (5)	19:50	19 07:37 (1)	18:53	12 18:29 (7)	17:05	23 07:59 (9)	16:45
10	05:50	06:21	19:54 (5)	06:57	07:19 (1)	07:33		07:14	07:38 (9)	07:50
	21:11	20:41	21 20:15 (5)	19:48	19 07:38 (1)	18:51		17:04	21 07:59 (9)	16:45
11	05:50	06:22	19:54 (5)	06:59	07:20 (1)	07:34		07:15	07:39 (9)	07:51
	21:11	20:39	19 20:13 (5)	19:47	18 07:38 (1)	18:49		17:03	18 07:57 (9)	16:45
12	05:51	06:24	19:54 (5)	07:00	07:21 (1)	07:36	08:40 (9)	07:17	07:41 (9)	07:52
	21:10	20:38	18 20:12 (5)	19:45	17 07:38 (1)	18:47	12 08:52 (9)	17:01	14 07:55 (9)	16:45
13	05:52	06:25	19:56 (5)	07:01	07:22 (1)	07:37	08:35 (9)	07:18	07:42 (9)	07:53
	21:10	20:36	15 20:11 (5)	19:43	15 07:37 (1)	18:46	20 08:55 (9)	17:00	11 07:53 (9)	16:45
14	05:53	06:26	19:56 (5)	07:02	07:23 (1)	07:38	08:33 (9)	07:19	07:43 (9)	07:54
	21:09	20:35	14 20:10 (5)	19:41	14 07:37 (1)	18:44	25 08:58 (9)	16:59	5 07:48 (9)	16:46
15	05:54	06:27	19:57 (5)	07:03	07:25 (1)	07:40	08:31 (9)	07:21		07:54
	21:09	20:33	11 20:08 (5)	19:39	12 07:37 (1)	18:42	29 09:00 (9)	16:58		16:46
16	05:55	06:28	19:58 (5)	07:04	07:26 (1)	07:41	08:29 (9)	07:22		07:55
	21:08	20:32	9 20:07 (5)	19:37	10 07:36 (1)	18:40	32 09:01 (9)	16:57		16:46
17	05:56	06:29	20:00 (5)	07:06	07:27 (1)	07:42	08:28 (9)	07:23		07:56
	21:07	20:30	5 20:05 (5)	19:35	8 07:35 (1)	18:39	35 09:03 (9)	16:56		16:46
18	05:57	06:31		07:07	07:28 (1)	07:43	08:26 (9)	07:25		07:57
	21:06	20:29		19:33	5 07:33 (1)	18:37	37 09:03 (9)	16:55		16:47
19	05:58	06:32		07:08	07:29 (1)	07:45	08:25 (9)	07:26		07:57
	21:06	20:27		19:32	2 07:31 (1)	18:35	39 09:04 (9)	16:55		16:47
20	05:58	06:33		07:09		07:46	08:24 (9)	07:27		07:58
	21:05	20:25		19:30		18:34	41 09:05 (9)	16:54		16:47
21	05:59	06:34		07:10	18:23 (7)	07:47	08:23 (9)	07:29		07:58
	21:04	20:24		19:28	13 18:36 (7)	18:32	42 09:05 (9)	16:53		16:48
22	06:00	06:35		07:11	18:21 (7)	07:49	08:22 (9)	07:30		07:59
	21:03	20:22		19:26	18 18:39 (7)	18:30	43 09:05 (9)	16:52		16:48
23	06:01	06:36		07:13	18:19 (7)	07:50	08:22 (9)	07:31		07:59
	21:02	20:20		19:24	22 18:41 (7)	18:29	44 09:06 (9)	16:51		16:49
24	06:02	06:38		07:14	18:17 (7)	07:51	08:21 (9)	07:32		08:00
	21:01	20:19		19:22	24 18:41 (7)	18:27	45 09:06 (9)	16:51		16:49
25	06:04	06:39		07:15	18:15 (7)	07:52	08:22 (9)	07:34		08:00
	21:00	20:17		19:20	27 18:42 (7)	18:26	45 09:07 (9)	16:50		16:50
26	06:05	06:40		07:16	18:14 (7)	07:54	08:21 (9)	07:35		08:01
	20:59	20:15		19:18	28 18:42 (7)	18:24	46 09:07 (9)	16:49		16:51
27	06:06	06:41		07:17	18:13 (7)	07:55	08:21 (9)	07:36		08:01
	20:58	20:14		19:16	29 18:42 (7)	18:23	45 09:06 (9)	16:49		16:51
28	06:07	06:42		07:19	18:13 (7)	07:56	08:21 (9)	07:37		08:01
	20:57	20:12		19:15	30 18:43 (7)	18:21	46 09:07 (9)	16:48		16:52
29	06:08	20:02 (5)	06:43	07:20	18:12 (7)	07:58	08:21 (9)	07:39		08:01
	20:56	10 20:12 (5)	20:10	19:13	31 18:43 (7)	18:20	45 09:06 (9)	16:48		16:53
30	06:09	20:00 (5)	06:45	07:21	18:11 (7)	07:59	08:22 (9)	07:40		08:02
	20:55	13 20:13 (5)	20:08	19:11	31 18:42 (7)	18:18	45 09:07 (9)	16:47		16:54
31	06:10	19:59 (5)	06:46			08:01	08:23 (9)			08:02
	20:54	16 20:15 (5)	20:07			18:17	43 09:06 (9)			16:54
Potential sun hours	471	435	377	341	289	276				
Total, worst case	39	309	431	969	362					
Sun reduction	0.76	0.74	0.69	0.63	0.50					
Oper. time red.	0.98	0.98	0.98	0.98	0.98					
Wind dir. red.	0.63	0.63	0.56	0.64	0.67					
Total reduction	0.47	0.46	0.38	0.40	0.33					
Total, real	18	141	164	384	118					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H346 - H346

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June					
1	08:02	08:41 (9)	07:45	16:31 (7)	07:04	07:25 (1)	07:08	19:04 (5)	06:17	05:44	
	16:56	30 09:11 (9)	17:33	31 17:02 (7)	18:11	11 07:36 (1)	19:51	25 19:29 (5)	20:28	21:02	
2	08:02	08:42 (9)	07:44	16:31 (7)	07:02	07:23 (1)	07:06	19:03 (5)	06:15	05:43	
	16:56	29 09:11 (9)	17:35	30 17:01 (7)	18:12	13 07:36 (1)	19:52	27 19:30 (5)	20:29	3 06:39 (8)	21:03
3	08:02	08:42 (9)	07:42	16:31 (7)	07:00	07:21 (1)	07:04	19:03 (5)	06:14	06:35 (8)	05:43
	16:57	29 09:11 (9)	17:36	31 17:02 (7)	18:14	14 07:35 (1)	19:53	26 19:29 (5)	20:30	6 06:41 (8)	21:03
4	08:02	08:43 (9)	07:41	16:32 (7)	06:59	07:19 (1)	07:02	19:03 (5)	06:12	06:34 (8)	05:42
	16:58	29 09:12 (9)	17:38	30 17:02 (7)	18:15	16 07:35 (1)	19:54	26 19:29 (5)	20:31	8 06:42 (8)	21:04
5	08:02	08:44 (9)	07:40	16:33 (7)	06:57	07:17 (1)	07:00	19:02 (5)	06:11	06:32 (8)	05:42
	16:59	28 09:12 (9)	17:39	29 17:02 (7)	18:16	17 07:34 (1)	19:56	26 19:28 (5)	20:33	10 06:42 (8)	21:05
6	08:02	08:45 (9)	07:39	16:33 (7)	06:55	07:16 (1)	06:58	19:03 (5)	06:10	06:31 (8)	05:42
	17:00	27 09:12 (9)	17:41	28 17:01 (7)	18:18	17 07:33 (1)	19:57	25 19:28 (5)	20:34	12 06:43 (8)	21:06
7	08:02	08:46 (9)	07:37	16:34 (7)	06:53	07:16 (1)	06:57	19:04 (5)	06:08	06:30 (8)	05:41
	17:01	26 09:12 (9)	17:42	26 17:00 (7)	18:19	16 07:32 (1)	19:58	23 19:27 (5)	20:35	14 06:44 (8)	21:06
8	08:01	08:46 (9)	07:36	16:35 (7)	07:52	08:17 (1)	06:55	19:04 (5)	06:07	06:28 (8)	05:41
	17:03	25 09:11 (9)	17:43	25 17:00 (7)	18:20	12 08:29 (1)	19:59	21 19:25 (5)	20:36	15 06:43 (8)	21:07
9	08:01	08:48 (9)	07:35	16:35 (7)	07:50	08:20 (1)	06:53	19:05 (5)	06:06	06:27 (8)	05:41
	17:04	24 09:12 (9)	17:45	24 16:59 (7)	19:22	5 08:25 (1)	20:01	18 19:23 (5)	20:37	17 06:44 (8)	21:08
10	08:01	08:49 (9)	07:34	16:37 (7)	07:48		06:51	19:06 (5)	06:04	06:26 (8)	05:40
	17:05	23 09:12 (9)	17:46	21 16:58 (7)	19:23		20:02	15 19:21 (5)	20:39	18 06:44 (8)	21:08
11	08:01	08:50 (9)	07:32	16:38 (7)	07:46		06:50	19:10 (5)	06:03	06:25 (8)	05:40
	17:06	21 09:11 (9)	17:48	18 16:56 (7)	19:24		20:03	9 19:19 (5)	20:40	19 06:44 (8)	21:09
12	08:00	08:52 (9)	07:31	16:41 (7)	07:44		06:48		06:02	06:24 (8)	05:40
	17:07	18 09:10 (9)	17:49	13 16:54 (7)	19:25		20:04		20:41	20 06:44 (8)	21:10
13	08:00	08:53 (9)	07:29		07:43		06:46		06:01	06:23 (8)	05:40
	17:08	16 09:09 (9)	17:50		19:27		20:06		20:42	21 06:44 (8)	21:10
14	07:59	08:55 (9)	07:28		07:41		06:44		06:00	06:21 (8)	05:40
	17:09	13 09:08 (9)	17:52		19:28		20:07		20:43	22 06:43 (8)	21:11
15	07:59	08:57 (9)	07:26		07:39		06:43		05:58	06:20 (8)	05:40
	17:11	9 09:06 (9)	17:53		19:29		20:08		20:44	23 06:43 (8)	21:11
16	07:58		07:25		07:37		06:41		05:57	06:19 (8)	05:40
	17:12		17:55		19:31		20:09		20:45	24 06:43 (8)	21:12
17	07:58		07:23		07:35		06:39		05:56	06:18 (8)	05:40
	17:13		17:56		19:32		20:10		20:47	24 06:42 (8)	21:12
18	07:57	16 16:38 (7)	07:22		07:33		06:37		05:55	06:19 (8)	05:40
	17:14	9 16:47 (7)	17:57		19:33		20:12		20:48	23 06:42 (8)	21:12
19	07:56	16:36 (7)	07:20		07:32		06:36		05:54	06:20 (8)	05:40
	17:16	12 16:48 (7)	17:59		19:34		20:13		20:49	21 06:41 (8)	21:13
20	07:56	16:36 (7)	07:19		07:30		06:34		05:53	06:21 (8)	05:40
	17:17	14 16:50 (7)	18:00		19:36		20:14		20:50	20 06:41 (8)	21:13
21	07:55	16:34 (7)	07:17		07:28		06:32		05:52	06:22 (8)	05:40
	17:18	18 16:52 (7)	18:00		19:37		20:15		20:51	18 06:40 (8)	21:13
22	07:54	16:33 (7)	07:16		07:26		06:31		05:51	06:23 (8)	05:40
	17:20	20 16:53 (7)	18:01		19:38		20:17		20:52	16 06:39 (8)	21:14
23	07:54	16:33 (7)	07:14		07:24		06:29		05:50	06:24 (8)	05:41
	17:21	21 16:54 (7)	18:03		19:39		20:18		20:53	14 06:38 (8)	21:14
24	07:53	16:32 (7)	07:12		07:22		06:27		05:49	06:25 (8)	05:41
	17:22	24 16:56 (7)	18:04		19:41		20:19		20:54	11 06:36 (8)	21:14
25	07:52	16:31 (7)	07:11		07:20		06:26		05:49	06:27 (8)	05:41
	17:24	26 16:57 (7)	18:06	2 07:33 (1)	19:42		20:20		20:55	7 06:34 (8)	21:14
26	07:51	16:31 (7)	07:09		07:30 (1)	07:19	19:14 (5)	06:24	05:48		05:42
	17:25	27 16:58 (7)	18:07	5 07:35 (1)	19:43	8 19:22 (5)	20:22		20:56		21:14
27	07:50	16:31 (7)	07:07		07:17		19:11 (5)	06:23	05:47		05:42
	17:27	28 16:59 (7)	18:08	7 07:35 (1)	19:44	12 19:23 (5)	20:23		20:57		21:14
28	07:49	16:31 (7)	07:06		07:15		19:08 (5)	06:21	05:46		05:42
	17:28	29 17:00 (7)	18:10	9 07:35 (1)	19:46	16 19:24 (5)	20:24		20:58		21:14
29	07:48	16:31 (7)			07:13		19:07 (5)	06:20	05:46		05:43
	17:29	29 17:00 (7)			19:47	18 19:25 (5)	20:25		20:59		21:14
30	07:47	16:31 (7)			07:11		19:05 (5)	06:18	05:45		05:43
	17:31	30 17:01 (7)			19:48	21 19:26 (5)	20:26		21:00		21:14
31	07:46	16:31 (7)			07:09		19:04 (5)		05:44		
	17:32	31 17:02 (7)			19:49	23 19:27 (5)			21:01		
Potential sun hours	287	292	369	403	458	465					
Total, worst case	665	329	219	241	386						
Sun reduction	0.57	0.59	0.59	0.61	0.65						
Oper. time red.	0.98	0.98	0.98	0.98	0.98						
Wind dir. red.	0.63	0.57	0.61	0.60	0.55						
Total reduction	0.36	0.33	0.36	0.36	0.35						
Total, real	237	108	78	87	137						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H347 - H347

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:33	07:04 18:11	07:08 19:51	07:58 (9) 19:28 (7)	06:17 20:28
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52	34 18:56 (7)	06:15 20:29
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 19:53	33 18:55 (7)	06:14 20:30
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 19:54	34 18:53 (7)	06:12 20:31
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:56	37 18:52 (7)	06:11 20:33
6	08:02 17:00	07:39 17:41	06:55 18:18	06:58 19:57	38 18:52 (7)	06:10 20:34
7	08:02 17:01	07:37 17:42	06:53 18:19	06:57 19:58	39 18:51 (7)	06:08 20:35
8	08:01 17:03	07:36 17:43	06:52 18:20	06:55 19:59	40 18:51 (7)	06:07 20:36
9	08:01 17:04	07:35 17:45	06:50 18:22	06:53 20:01	42 19:31 (7)	06:06 20:37
10	08:01 17:05	07:34 17:46	06:48 19:23	06:51 20:02	45 19:31 (7)	06:04 20:39
11	08:01 17:06	07:32 17:48	06:46 19:24	06:50 20:03	47 19:31 (7)	06:03 20:40
12	08:00 17:07	07:31 17:49	06:44 19:25	06:48 20:04	49 19:31 (7)	06:02 20:41
13	08:00 17:08	07:29 17:50	06:43 19:27	06:46 20:06	50 19:30 (7)	06:01 20:42
14	07:59 17:09	07:28 17:52	06:41 19:28	06:44 20:07	51 19:30 (7)	06:00 20:43
15	07:59 17:11	07:26 17:53	06:39 19:29	06:43 20:08	52 19:29 (7)	05:58 20:44
16	07:58 17:12	07:25 17:55	06:37 19:31	06:41 20:09	52 19:28 (7)	05:57 20:45
17	07:58 17:13	07:23 17:56	06:35 19:32	06:39 20:10	50 19:27 (7)	05:56 20:47
18	07:57 17:14	07:22 17:57	06:33 19:33	06:37 20:12	51 19:26 (7)	05:55 20:48
19	07:56 17:16	07:20 17:59	06:32 19:34	06:36 20:13	47 19:25 (7)	05:54 20:49
20	07:56 17:17	07:19 18:00	06:30 19:36	06:34 20:14	38 18:51 (7)	05:53 20:50
21	07:55 17:18	07:17 18:01	06:28 19:37	06:32 20:15	32 19:23 (7)	05:52 20:51
22	07:54 17:20	07:16 18:02	06:26 19:38	06:31 20:17	32 18:54 (7)	05:51 20:52
23	07:53 17:21	07:14 18:03	06:24 19:39	06:29 20:18	26 19:20 (7)	05:50 20:53
24	07:53 17:22	07:12 18:04	06:22 19:41	06:27 20:19	47 18:58 (7)	05:50 20:54
25	07:52 17:24	07:11 18:06	06:21 19:42	06:26 20:20	23 19:19 (7)	05:49 20:55
26	07:51 17:25	07:09 18:07	06:19 19:43	06:24 20:22	11 19:13 (7)	05:48 20:56
27	07:50 17:27	07:07 18:08	06:17 19:44	06:23 20:23	11 19:13 (7)	05:47 20:57
28	07:49 17:28	07:06 18:10	06:15 19:46	06:21 20:24	11 19:13 (7)	05:46 20:58
29	07:48 17:29	07:04 19:47	06:13 19:47	06:20 20:25	11 19:13 (7)	05:46 20:59
30	07:47 17:31	07:02 19:48	06:11 19:48	06:18 20:26	11 19:13 (7)	05:45 21:00
31	07:46 17:32	07:00 19:49	06:09 19:49	06:16 19:25 (7)	11 19:13 (7)	05:44 21:01
Potential sun hours	287	292	369	403	458	465
Total, worst case			600	970		254
Sun reduction			0.59	0.61		0.70
Oper. time red.			0.98	0.98		0.98
Wind dir. red.			0.61	0.60		0.69
Total reduction			0.35	0.36		0.47
Total, real			211	346		119

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H347 - H347

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	20:38 (5)	06:11	06:47	07:09 (1)	07:22	07:43 (9)	07:02	07:41
	21:14	8 20:46 (5)	20:53	20:05	49 19:30 (7)	19:09	14 07:57 (9)	17:15	16:47
2	05:44	20:39 (5)	06:12	06:48	07:10 (1)	07:23	07:44 (9)	07:03	07:42
	21:14	8 20:47 (5)	20:51	20:03	47 19:30 (7)	19:07	10 07:54 (9)	17:14	16:47
3	05:45	20:39 (5)	06:13	06:49	07:11 (1)	07:25	07:46 (9)	07:05	07:43
	21:14	7 20:46 (5)	20:50	20:01	45 19:29 (7)	19:05	6 07:52 (9)	17:13	16:46
4	05:46	20:40 (5)	06:14	06:50	07:12 (1)	07:26		07:06	07:44
	21:14	6 20:46 (5)	20:49	19:59	42 19:28 (7)	19:04		17:11	16:46
5	05:46	20:41 (5)	06:16	06:52	18:47 (7)	07:27		07:07	07:45
	21:13	4 20:45 (5)	20:48	19:58	40 19:27 (7)	19:02		17:10	16:46
6	05:47	20:43 (5)	06:17	06:53	18:47 (7)	07:28		07:09	07:46
	21:13	2 20:45 (5)	20:46	19:56	39 19:26 (7)	19:00		17:09	16:46
7	05:48		06:18	06:54	18:47 (7)	07:30		07:10	07:47
	21:13		20:45	19:54	38 19:25 (7)	18:56		17:07	16:45
8	05:48		06:19	06:55	18:48 (7)	07:31		07:11	07:48
	21:12		20:44	19:52	37 19:25 (7)	18:54		17:06	16:45
9	05:49		06:20	06:56	18:49 (7)	07:32		07:13	07:49
	21:12		20:42	19:50	35 19:24 (7)	18:53		17:05	16:45
10	05:50		06:21	06:57	18:50 (7)	07:33		07:14	07:50
	21:11		20:41	19:48	32 19:22 (7)	18:51		17:04	16:45
11	05:51		06:22	06:59	18:50 (7)	07:35		07:15	07:51
	21:11		20:39	19:47	30 19:20 (7)	18:49		17:03	16:45
12	05:51		06:24	07:00	07:45 (9)	07:36		07:17	07:52
	21:10		20:38	19:45	40 19:18 (7)	18:47		17:01	16:45
13	05:52		06:25	07:01	07:42 (9)	07:37		07:18	07:53
	21:10		20:36	19:43	41 19:15 (7)	18:46		17:00	16:45
14	05:53		06:26	07:02	07:39 (9)	07:38		07:19	07:54
	21:09		20:35	19:41	40 19:12 (7)	18:44		16:59	16:46
15	05:54		06:27	07:03	07:38 (9)	07:40		07:21	07:54
	21:09		20:33	19:39	31 19:06 (7)	18:42		16:58	16:46
16	05:55		06:28	07:04	07:37 (9)	07:41		07:22	07:55
	21:08		20:32	19:37	28 08:05 (9)	18:40		16:57	16:46
17	05:56		06:29	07:06	07:35 (9)	07:42		07:23	07:56
	21:07		20:30	19:35	31 08:06 (9)	18:39		16:56	16:46
18	05:57		06:31	19:07 (7)	07:07	07:34 (9)	07:43	07:25	07:57
	21:06		20:29	13 19:20 (7)	19:33	32 08:06 (9)	18:37	16:55	16:47
19	05:58		06:32	19:03 (7)	07:08	07:33 (9)	07:45	07:26	07:57
	21:06		20:27	19 19:22 (7)	19:32	33 08:06 (9)	18:35	16:55	16:47
20	05:59		06:33	19:01 (7)	07:09	07:32 (9)	07:46	07:27	07:58
	21:05		20:25	23 19:24 (7)	19:30	34 08:06 (9)	18:34	16:54	16:47
21	05:59		06:34	18:59 (7)	07:10	07:31 (9)	07:47	07:29	07:58
	21:04		20:24	27 19:26 (7)	19:28	35 08:06 (9)	18:32	16:53	16:48
22	06:00		06:35	18:58 (7)	07:11	07:33 (9)	07:49	07:30	07:59
	21:03		20:22	29 19:27 (7)	19:26	34 08:07 (9)	18:30	16:52	16:48
23	06:01		06:36	18:56 (7)	07:13	07:34 (9)	07:50	07:31	07:59
	21:02		20:20	32 19:28 (7)	19:24	32 08:06 (9)	18:29	16:51	16:49
24	06:03		06:38	07:06 (1)	07:14	07:35 (9)	07:51	07:32	08:00
	21:01		20:19	39 19:29 (7)	19:22	31 08:06 (9)	18:27	16:51	16:49
25	06:04		06:39	07:02 (1)	07:15	07:36 (9)	07:53	07:34	08:00
	21:00		20:17	48 19:29 (7)	19:20	29 08:05 (9)	18:26	16:50	16:50
26	06:05		06:40	07:02 (1)	07:16	07:37 (9)	07:54	07:35	08:01
	20:59		20:15	51 19:30 (7)	19:18	27 08:04 (9)	18:24	16:50	16:51
27	06:06		06:41	07:03 (1)	07:17	07:38 (9)	07:55	07:36	08:01
	20:58		20:14	52 19:30 (7)	19:17	25 08:03 (9)	18:23	16:49	16:51
28	06:07		06:42	07:04 (1)	07:19	07:40 (9)	07:56	07:37	08:01
	20:57		20:12	52 19:30 (7)	19:15	22 08:02 (9)	18:21	16:48	16:52
29	06:08		06:43	07:05 (1)	07:20	07:41 (9)	07:58	07:39	08:01
	20:56		20:10	52 19:30 (7)	19:13	20 08:01 (9)	18:20	16:48	16:53
30	06:09		06:45	07:07 (1)	07:21	07:42 (9)	07:59	07:40	08:02
	20:55		20:08	52 19:31 (7)	19:11	17 07:59 (9)	18:18	16:47	16:54
31	06:10		06:46	07:08 (1)			08:01		08:02
	20:54		20:07	50 19:30 (7)			18:17		16:54
Potential sun hours	471	435	377	341	289	276			
Total, worst case	35	539	1016	30					
Sun reduction	0.76	0.74	0.69	0.63					
Oper. time red.	0.98	0.98	0.98	0.98					
Wind dir. red.	0.69	0.60	0.61	0.61					
Total reduction	0.51	0.43	0.41	0.38					
Total, real	18	232	415	11					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H348 - H348

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H349 - H349

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:09 (4)	07:22	07:02	07:41	
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	7	07:16 (4)	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:10 (4)	07:24	07:03	07:42	
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:52	20:03	5	07:15 (4)	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:11 (4)	07:25	07:05	07:43	
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	2	07:13 (4)	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51		07:26	07:06	07:44	
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00		19:04	17:11	16:46	
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52		07:27	07:07	07:45	
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58		19:02	17:10	16:46	
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53		07:28	07:09	07:47	
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56		19:00	17:09	16:46	
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54		07:30	07:10	07:48	
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54		18:56	17:07	16:46	
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55		07:31	07:11	07:49	
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52		18:55	17:06	16:45	
9	08:01	07:35	07:50	06:53	07:13 (4)	06:06	05:41	05:49	06:56		07:32	07:13	07:49	
	17:04	17:45	19:22	20:01	2	07:15 (4)	20:38	21:08	19:50		18:53	17:05	16:45	
10	08:01	07:34	07:48	06:51	07:12 (4)	06:05	05:40	05:50	06:58		07:33	07:14	07:50	
	17:05	17:46	19:23	20:02	5	07:17 (4)	20:39	21:09	19:49		18:51	17:04	16:45	
11	08:01	07:32	07:46	06:50	07:10 (4)	06:03	05:40	05:51	06:59		07:35	07:16	07:51	
	17:06	17:48	19:24	20:03	7	07:17 (4)	20:40	21:09	19:47		18:49	17:03	16:45	
12	08:00	07:31	07:45	06:48	07:08 (4)	06:02	05:40	05:51	07:00		07:36	07:17	07:52	
	17:07	17:49	19:26	20:04	9	07:17 (4)	20:41	21:10	19:45		18:47	17:02	16:45	
13	08:00	07:29	07:43	06:46	07:06 (4)	06:01	05:40	05:52	07:01		07:37	07:18	07:53	
	17:08	17:51	19:27	20:06	11	07:17 (4)	20:42	21:10	19:43		18:46	17:01	16:46	
14	08:00	07:28	07:41	06:44	07:05 (4)	06:00	05:40	05:53	07:02		07:38	07:20	07:54	
	17:10	17:52	19:28	20:07	12	07:17 (4)	20:43	21:11	19:41		18:44	16:59	16:46	
15	07:59	07:27	07:39	06:43	07:03 (4)	05:59	05:40	05:54	07:03		07:40	07:21	07:55	
	17:11	17:53	19:29	20:08	14	07:17 (4)	20:44	21:11	19:39		18:42	16:58	16:46	
16	07:58	07:25	07:37	06:41	07:01 (4)	05:57	05:40	05:55	07:05		07:41	07:22	07:55	
	17:12	17:55	19:31	20:09	15	07:16 (4)	20:46	21:12	19:37		18:41	16:57	16:46	
17	07:58	07:24	07:35	06:39	07:00 (4)	05:56	05:40	05:56	07:06		07:42	07:24	07:56	
	17:13	17:56	19:32	20:11	15	07:15 (4)	20:47	21:12	19:35		18:39	16:57	16:46	
18	07:57	07:22	07:34	06:38	06:59 (4)	05:55	05:40	05:57	07:07		07:44	07:25	07:57	
	17:15	17:58	19:33	20:12	15	07:14 (4)	20:48	21:13	19:34		18:37	16:56	16:47	
19	07:57	07:20	07:32	06:36	07:00 (4)	05:54	05:40	05:58	07:08		07:45	07:26	07:57	
	17:16	17:59	19:35	20:13	12	07:12 (4)	20:49	21:13	19:32		18:35	16:55	16:47	
20	07:56	07:19	07:30	06:34	07:03 (4)	05:53	05:40	05:59	07:09		07:46	07:28	07:58	
	17:17	18:00	19:36	20:14	7	07:10 (4)	20:50	21:13	19:30		18:34	16:54	16:48	
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10		07:47	07:29	07:59	
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28		18:32	16:53	16:48	
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12		07:49	07:30	07:59	
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26		18:31	16:52	16:48	
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13		07:50	07:31	08:00	
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24		18:29	16:52	16:49	
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14		07:51	07:33	08:00	
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22		18:27	16:51	16:50	
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15		07:53	07:34	08:00	
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20		18:26	16:50	16:50	
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16		07:54	07:35	08:01	
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19		18:24	16:50	16:51	
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18		07:55	07:36	08:01	
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17		18:23	16:49	16:51	
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19		07:57	07:38	08:01	
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15		18:21	16:49	16:52	
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20		07:58	07:39	08:02	
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13		18:20	16:48	16:53	
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21		07:59	07:40	08:02	
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11		18:18	16:48	16:54	
31	07:46		07:10		05:45		06:10	06:46			08:01		08:02	
	17:32		19:50		21:01		20:54	20:07	9	07:17 (4)	18:17		16:55	
Potential sun hours	287	292	369	403	458	465	471	435	377		341	289	276	
Total, worst case				124				112			14			
Sun reduction				0.61				0.74			0.69			
Oper. time red.				0.98				0.98			0.98			
Wind dir. red.				0.55				0.55			0.55			
Total reduction				0.33				0.40			0.37			
Total, real				41				45			5			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H350 - H350

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:02	07:45	08:07 (4)	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:25 (5)	07:41		
	16:56	17:34	16	08:23 (4)	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	31	07:56 (4)	16:47
2	08:02	07:44	08:06 (4)	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:26 (5)	07:42		
	16:57	17:35	18	08:24 (4)	18:12	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	30	07:56 (4)	16:47
3	08:02	07:43	08:04 (4)	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:28 (5)	07:43		
	16:58	17:36	20	08:24 (4)	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	28	07:56 (4)	16:46
4	08:02	07:41	08:03 (4)	06:59	07:02	06:12	05:42	05:46	06:15	06:51	07:26	07:06	07:29 (5)	07:44		
	16:58	17:38	22	08:25 (4)	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	27	07:56 (4)	16:46
5	08:02	07:40	08:02 (5)	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:31 (5)	07:45		
	16:59	17:39	24	08:26 (4)	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	25	07:56 (4)	16:46
6	08:02	07:39	08:00 (5)	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:32 (5)	07:46		
	17:00	17:41	25	08:25 (4)	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	23	07:55 (4)	16:46
7	08:02	07:38	07:59 (5)	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:33 (4)	07:48		
	17:02	17:42	27	08:26 (4)	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	22	07:55 (4)	16:46
8	08:02	07:36	07:58 (5)	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:35 (4)	07:49		
	17:03	17:43	29	08:27 (4)	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	20	07:55 (4)	16:45
9	08:01	07:35	07:56 (5)	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:36 (4)	07:49		
	17:04	17:45	30	08:26 (4)	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	18	07:54 (4)	16:45
10	08:01	07:34	07:55 (5)	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:38 (4)	07:50		
	17:05	17:46	31	08:26 (4)	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16	07:54 (4)	16:45
11	08:01	07:32	07:54 (5)	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:39 (4)	07:51		
	17:06	17:48	32	08:26 (4)	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	13	07:52 (4)	16:45
12	08:00	07:31	07:52 (5)	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:41 (4)	07:52		
	17:07	17:49	33	08:25 (4)	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:02	11	07:52 (4)	16:45
13	08:00	07:29	07:51 (5)	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:42 (4)	07:53		
	17:08	17:51	34	08:25 (4)	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	8	07:50 (4)	16:46
14	07:59	07:28	07:50 (5)	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:44 (4)	07:54		
	17:10	17:52	34	08:24 (4)	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	5	07:49 (4)	16:46
15	07:59	07:27	07:51 (5)	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:45 (4)	07:55		
	17:11	17:53	33	08:24 (4)	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	1	07:46 (4)	16:46
16	07:58	07:25	07:53 (5)	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:52	07:55		
	17:12	17:55	29	08:22 (4)	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46		
17	07:58	07:24	08:02 (4)	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56	07:56		
	17:13	17:56	19	08:21 (4)	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46		
18	07:57	07:22	08:03 (4)	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57	07:57		
	17:15	17:57	15	08:18 (4)	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47		
19	07:57	07:20	08:06 (4)	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57	07:57		
	17:16	17:59	8	08:14 (4)	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47		
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:46	07:27	07:58	07:58		
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47	16:54	16:47		
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:47	07:29	07:59	07:59		
	17:18	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48	16:53	16:48		
22	07:54	07:16	07:26	06:31	05:51	05:40	06:01	06:35	07:12	07:49	07:30	07:30	07:59	07:59		
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48	16:52	16:48		
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:31	08:00	08:00		
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	11	08:35 (4)	07:31	16:49		
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:33	08:00	08:00		
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	17	08:49 (4)	07:34	16:50		
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	08:31 (4)	07:34	08:00	08:00		
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	20	08:51 (4)	07:35	16:50		
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	08:22 (5)	07:35	08:01	08:01		
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	30	08:52 (4)	07:36	16:51		
27	07:50	08:12 (4)	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	08:21 (5)	07:36	08:01		
	17:27	2	08:14 (4)	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	33	08:54 (4)	16:49	
28	07:49	08:11 (4)	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	08:19 (5)	07:38	08:01		
	17:28	5	08:16 (4)	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	35	08:54 (4)	16:48	
29	07:48	08:10 (4)	07:05	07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	08:20 (5)	07:39	08:02		
	17:29	8	08:18 (4)	18:09	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	34	08:54 (4)	16:48	
30	07:47	08:09 (4)	07:04	07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	08:22 (5)	07:40	08:02		
	17:31	11	08:20 (4)	19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	33	08:55 (4)	16:48		
31	07:46	08:08 (4)	07:03	07:10	06:19	05:45	05:45	06:10	06:46	07:22	07:59	08:01	08:23 (5)	08:02		
	17:32	14	08:22 (4)	19:50	20:29	21:01	21:15	20:54	20:07	19:10	18:17	32	08:55 (4)	16:55		
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	278	276	276		
Total, worst case	40	479									245	278				
Sun reduction	0.57	0.59									0.63	0.50				
Oper. time red.	0.98	0.98									0.98	0.98				
Wind dir. red.	0.67	0.67									0.67	0.67				
Total reduction	0.37	0.39									0.41	0.33				
Total, real	15	185									101	91				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H351 - H351

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:02	15:51 (4)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41			
	16:56	21	16:12 (4)	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47		
2	08:02	15:51 (4)	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	15:44 (4)		
	16:56	20	16:11 (4)	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47	6	15:50 (4)
3	08:02	15:52 (4)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43	15:44 (4)		
	16:57	19	16:11 (4)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46	9	15:53 (4)
4	08:02	15:53 (4)	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44	15:42 (4)		
	16:58	18	16:11 (4)	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46	13	15:55 (4)
5	08:02	15:54 (4)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	15:42 (4)		
	16:59	17	16:11 (4)	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46	14	15:56 (4)
6	08:02	15:55 (4)	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46	15:41 (4)		
	17:00	16	16:11 (4)	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46	16	15:57 (4)
7	08:02	15:57 (4)	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47	15:41 (4)		
	17:01	14	16:11 (4)	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45	17	15:58 (4)
8	08:02	15:57 (4)	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	15:41 (4)		
	17:03	13	16:10 (4)	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45	18	15:59 (4)
9	08:01	15:59 (4)	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49	15:41 (4)		
	17:04	10	16:09 (4)	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45	19	16:00 (4)
10	08:01	16:02 (4)	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50	15:41 (4)		
	17:05	6	16:08 (4)	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:48	18:51	17:04	16:45	20	16:01 (4)
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51	15:41 (4)			
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45	21	16:02 (4)		
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52	15:41 (4)			
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45	22	16:03 (4)		
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53	15:41 (4)			
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45	21	16:02 (4)		
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54	15:41 (4)			
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46	22	16:03 (4)		
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55	15:42 (4)			
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46	22	16:04 (4)		
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55	15:42 (4)			
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46	23	16:05 (4)		
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56	15:42 (4)			
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46	23	16:05 (4)		
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57	15:43 (4)			
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:47	23	16:06 (4)		
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57	15:43 (4)			
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47	24	16:07 (4)		
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58	15:43 (4)			
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47	24	16:07 (4)		
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58	15:44 (4)			
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48	24	16:08 (4)		
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:12	07:49	07:30	07:59	15:44 (4)			
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48	24	16:08 (4)		
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59	15:45 (4)			
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49	24	16:09 (4)		
24	07:53	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00	15:45 (4)			
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49	24	16:09 (4)		
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00	15:46 (4)			
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	23	16:09 (4)		
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01	15:47 (4)			
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51	23	16:10 (4)		
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01	15:47 (4)			
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51	23	16:10 (4)		
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01	15:48 (4)			
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52	22	16:10 (4)		
29	07:48	07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01	15:48 (4)				
	17:29	18:11	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53	22	16:10 (4)		
30	07:47	07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02	15:49 (4)				
	17:31	18:13	19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54	21	16:10 (4)		
31	07:46	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01	15:47 (4)			
	17:32	18:14	19:49	20:28	21:01	21:15	20:54	20:07	19:10	18:17	16:48	16:54	22	16:11 (4)		
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276	609			
Total, worst case	154												609			
Sun reduction	0.57												0.49			
Oper. time red.	0.98												0.98			
Wind dir. red.	0.55												0.55			
Total reduction	0.31												0.26			
Total, real	47												160			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H352 - H352

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H353 - H353

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:33	07:04 18:11	07:25 (2) 07:41 (2)	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09	07:02 17:15
2	08:02 16:56	07:44 17:35	07:02 18:12	07:23 (2) 07:40 (2)	07:06 19:52	06:15 20:29	05:43 21:03	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14
3	08:02 16:57	07:42 17:36	07:00 18:14	07:21 (2) 07:39 (2)	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	07:05 17:13
4	08:02 16:58	07:41 17:38	06:59 18:15	07:20 (2) 07:38 (2)	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:14	06:14 20:49	06:50 19:59	07:26 19:03	07:06 17:11
5	08:02 16:59	07:40 17:39	06:57 18:16	07:20 (2) 07:36 (2)	07:00 19:56	06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10
6	08:02 17:00	07:39 17:41	06:55 18:18	07:23 (2) 07:35 (2)	06:58 19:57	06:10 20:34	05:41 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	07:09 17:09
7	08:02 17:01	07:38 17:42	06:53 18:19	07:27 (2) 07:30 (2)	06:57 19:58	06:08 20:35	05:41 21:06	05:47 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:07
8	08:01 17:02	07:36 17:43	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:44	06:55 19:52	07:31 18:54	07:57 (2) 08:11 (2)	07:11 17:06
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53	07:55 (2) 08:12 (2)	07:13 17:05
10	08:01 17:05	07:34 17:46	07:48 19:23	06:51 20:02	06:04 20:39	05:40 21:08	05:50 21:11	06:21 20:41	06:57 19:48	07:33 18:51	07:54 (2) 08:13 (2)	07:14 17:04
11	08:01 17:06	07:32 17:48	07:46 19:24	06:49 20:03	06:03 20:40	05:40 21:09	05:50 21:11	06:22 20:39	06:59 19:47	07:35 18:49	07:56 (2) 08:14 (2)	07:15 17:03
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	06:02 20:41	05:40 21:10	05:51 21:10	06:24 20:38	07:00 19:45	07:36 18:47	07:57 (2) 08:14 (2)	07:17 17:01
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:58 (2) 08:14 (2)	07:18 17:00
14	07:59 17:09	07:28 17:52	07:41 19:28	06:44 20:07	05:59 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	08:00 (2) 08:14 (2)	07:19 16:59
15	07:59 17:11	07:26 17:53	07:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:03 19:39	07:40 18:42	08:01 (2) 08:13 (2)	07:21 16:58
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:57 20:46	05:40 21:12	05:55 21:08	06:28 20:32	07:04 19:37	07:41 18:40	08:02 (2) 08:13 (2)	07:22 16:57
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:47	05:40 21:12	05:56 21:07	06:29 20:30	07:06 19:35	07:42 18:39	08:04 (2) 08:12 (2)	07:23 16:56
18	07:57 17:14	07:22 17:57	07:33 19:33	06:37 20:12	05:55 20:48	05:40 21:12	05:57 21:07	06:31 20:29	07:07 19:33	07:43 18:37	08:05 (2) 08:11 (2)	07:25 16:55
19	07:57 17:16	07:20 17:59	07:32 19:34	06:36 20:13	05:54 20:49	05:40 21:13	05:57 21:06	06:32 20:27	07:08 19:32	07:45 18:35	08:06 (2) 08:09 (2)	07:26 16:55
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	05:53 20:50	05:40 21:13	05:58 21:05	06:33 20:25	07:09 19:30	07:46 18:34	08:13 (2) 08:02 (2)	07:27 16:54
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:51	05:40 21:13	05:59 21:04	06:34 20:24	07:10 19:28	07:47 18:32	07:58 (2) 07:11	07:29 16:53
22	07:54 17:20	07:16 18:01	07:36 (2) 19:37 (2)	06:31 20:17	05:51 20:52	05:40 21:14	06:00 21:03	06:35 20:22	07:11 19:26	07:49 18:30	08:09 (2) 08:04 (2)	07:30 16:52
23	07:54 17:21	07:14 18:03	07:35 (2) 19:39	06:29 20:18	05:50 20:53	05:41 21:14	06:01 21:02	06:36 20:20	07:13 19:24	07:50 18:29	08:12 (2) 08:05 (2)	07:31 16:51
24	07:53 17:22	07:12 18:04	07:33 (2) 19:41	06:27 20:19	05:49 20:54	05:41 21:14	06:02 21:01	06:38 20:19	07:14 19:22	07:51 18:27	08:11 (2) 08:06 (2)	07:33 16:51
25	07:52 17:24	07:11 18:06	07:31 (2) 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:03 21:00	06:39 20:17	07:15 19:20	07:53 18:26	08:13 (2) 08:04 (2)	07:34 16:50
26	07:51 17:25	07:09 18:07	07:30 (2) 19:43	06:24 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:54 18:24	08:14 (2) 08:05 (2)	07:35 16:49
27	07:50 17:26	07:07 18:08	07:28 (2) 19:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:17 19:16	07:55 18:23	08:15 (2) 08:06 (2)	07:36 16:49
28	07:49 17:28	07:06 18:10	07:26 (2) 19:46	06:21 20:24	05:46 20:58	05:42 21:14	06:07 20:57	06:42 20:12	07:19 19:15	07:57 18:21	08:16 (2) 08:07 (2)	07:37 16:48
29	07:48 17:29	07:05 18:09	07:25 (2) 19:45	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	07:58 18:20	08:17 (2) 08:08 (2)	07:39 16:48
30	07:47 17:31	07:04 18:11	07:24 (2) 19:48	06:18 20:26	05:45 21:00	05:43 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	08:18 (2) 08:09 (2)	07:40 16:47
31	07:46 17:32	07:03 18:16	07:23 (2) 19:49	06:17 20:27	05:44 21:01	05:44 21:14	06:10 20:54	06:46 20:07	08:01 18:17	07:59 17:04	08:19 (2) 08:10 (2)	07:41 16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case		60	100							164		
Sun reduction		0.59	0.59							0.63		
Oper. time red.		0.98	0.98							0.98		
Wind dir. red.		0.62	0.62							0.62		
Total reduction		0.36	0.36							0.38		
Total, real		22	36							63		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H354 - H354

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	09:06 (8)	07:45	07:04	07:08	06:17
	16:56	31 09:37 (8)	17:33	18:11	19:51	20:28
2	08:02	09:07 (8)	07:44	07:02	07:06	06:15
	16:56	30 09:37 (8)	17:35	18:12	19:52	20:29
3	08:02	09:08 (8)	07:42	07:00	07:04	06:14
	16:57	29 09:37 (8)	17:36	18:14	19:53	20:30
4	08:02	09:09 (8)	07:41	06:59	07:02	06:12
	16:58	28 09:37 (8)	17:38	18:15	19:54	20:31
5	08:02	09:10 (8)	07:40	06:57	07:00	06:11
	16:59	27 09:37 (8)	17:39	18:16	19:56	20:33
6	08:02	09:11 (8)	07:39	06:55	06:58	06:10
	17:00	26 09:37 (8)	17:40	18:18	19:57	20:34
7	08:02	09:13 (8)	07:37	06:53	06:57	06:08
	17:01	24 09:37 (8)	17:42	18:19	19:58	20:35
8	08:01	09:14 (8)	07:36	07:52	06:55	06:07
	17:02	22 09:36 (8)	17:43	17:19 (6)	18:20	19:59
9	08:01	09:15 (8)	07:35	17:13 (6)	07:50	06:53
	17:04	20 09:35 (8)	17:45	7 17:20 (6)	19:22	20:01
10	08:01	09:18 (8)	07:33	17:12 (6)	07:48	06:51
	17:05	16 09:34 (8)	17:46	10 17:22 (6)	19:23	20:02
11	08:01	09:20 (8)	07:32	17:11 (6)	07:46	06:49
	17:06	12 09:32 (8)	17:48	11 17:22 (6)	19:24	20:03
12	08:00	09:24 (8)	07:31	17:10 (6)	07:44	06:48
	17:07	5 09:29 (8)	17:49	14 17:24 (6)	19:25	20:04
13	08:00		07:29	17:10 (6)	07:43	06:46
	17:08		17:50	16 17:26 (6)	19:27	20:05
14	07:59		07:28	17:09 (6)	07:41	06:44
	17:09		17:52	18 17:27 (6)	19:28	20:07
15	07:59		07:26	17:09 (6)	07:39	06:42
	17:11		17:53	19 17:28 (6)	19:29	20:08
16	07:58		07:25	17:09 (6)	07:37	06:41
	17:12		17:55	21 17:30 (6)	19:31	20:09
17	07:58		07:23	17:09 (6)	07:35	06:39
	17:13		17:56	22 17:31 (6)	19:32	20:10
18	07:57		07:22	17:09 (6)	07:33	06:37
	17:14		17:57	24 17:33 (6)	19:33	20:12
19	07:56		07:20	17:09 (6)	07:32	06:36
	17:16		17:59	23 17:32 (6)	19:34	20:13
20	07:56		07:19	17:11 (6)	07:30	06:34
	17:17		18:00	21 17:32 (6)	19:36	20:14
21	07:55		07:17	17:11 (6)	07:28	06:32
	17:18		18:00	20 17:31 (6)	19:37	20:15
22	07:54		07:16	17:12 (6)	07:26	06:31
	17:20		18:01	17 17:29 (6)	19:38	20:17
23	07:53		07:14	17:14 (6)	07:24	06:29
	17:21		18:03	14 17:28 (6)	19:39	20:18
24	07:53		07:12	17:17 (6)	07:22	06:27
	17:22		18:04	7 17:24 (6)	19:41	20:19
25	07:52		07:11		07:20	06:26
	17:24		18:06		19:42	20:20
26	07:51		07:09		07:19	06:24
	17:25		18:07		19:43	20:22
27	07:50		07:07		07:17	06:23
	17:26		18:08		19:44	20:23
28	07:49		07:06		07:15	06:21
	17:28		18:10		19:46	20:24
29	07:48				07:13	06:20
	17:29				19:47	20:25
30	07:47				07:11	06:18
	17:31				19:48	20:26
31	07:46				07:09	05:44
	17:32				19:49	21:01
Potential sun hours	287	292	369	403	458	465
Total, worst case	270	267			100	771
Sun reduction	0.57	0.59			0.65	0.70
Oper. time red.	0.98	0.98			0.98	0.98
Wind dir. red.	0.71	0.55			0.56	0.56
Total reduction	0.40	0.33			0.36	0.39
Total, real	108	87			36	301

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H354 - H354

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:08 (2)	06:11	06:47	07:22	07:02
	21:14	26	06:34 (2)	20:53	20:05	19:09
2	05:44	06:09 (2)	06:12	06:48	07:23	07:03
	21:14	26	06:35 (2)	20:51	20:03	19:07
3	05:45	06:09 (2)	06:13	06:49	07:25	07:05
	21:14	25	06:34 (2)	20:50	20:01	19:05
4	05:45	06:10 (2)	06:14	06:50	07:26	07:06
	21:14	25	06:35 (2)	20:49	19:59	19:03
5	05:46	06:10 (2)	06:16	06:52	07:27	07:07
	21:13	24	06:34 (2)	20:48	19:58	19:02
6	05:47	06:11 (2)	06:17	06:53	07:28	07:09
	21:13	23	06:34 (2)	20:46	19:56	19:00
7	05:47	06:12 (2)	06:18	06:54	07:30	07:10
	21:13	23	06:35 (2)	20:45	19:54	18:56
8	05:48	06:12 (2)	06:19	06:55	07:31	07:11
	21:12	22	06:34 (2)	20:43	19:52	18:54
9	05:49	06:13 (2)	06:20	06:56	07:32	07:13
	21:12	21	06:34 (2)	20:42	19:50	18:53
10	05:50	06:14 (2)	06:21	06:57	07:33	07:14
	21:11	20	06:34 (2)	20:41	19:48	18:51
11	05:50	06:15 (2)	06:22	06:59	07:34	07:15
	21:11	19	06:34 (2)	20:39	19:47	18:49
12	05:51	06:15 (2)	06:24	07:00	07:36	07:17
	21:10	18	06:33 (2)	20:38	19:45	18:47
13	05:52	06:16 (2)	06:25	07:01	07:37	07:18
	21:10	17	06:33 (2)	20:36	19:43	18:46
14	05:53	06:17 (2)	06:26	07:02	07:38	07:19
	21:09	15	06:32 (2)	20:35	19:41	18:44
15	05:54	06:18 (2)	06:27	07:03	07:40	07:21
	21:09	14	06:32 (2)	20:33	19:39	18:42
16	05:55	06:19 (2)	06:28	07:04	07:41	07:22
	21:08	12	06:31 (2)	20:32	19:37	18:40
17	05:56	06:20 (2)	06:29	07:06	07:42	07:23
	21:07	11	06:31 (2)	20:30	19:35	18:39
18	05:57	06:21 (2)	06:31	07:07	07:43	07:25
	21:06	9	06:30 (2)	20:29	19:33	18:37
19	05:57	06:21 (2)	06:32	07:08	07:45	07:26
	21:06	7	06:28 (2)	20:27	19:32	18:35
20	05:58	06:22 (2)	06:33	07:09	07:46	07:27
	21:05	4	06:26 (2)	20:25	19:30	18:34
21	05:59	06:23 (2)	06:34	07:10	07:47	07:29
	21:04	1	06:24 (2)	20:24	19:28	18:32
22	06:00	06:35	07:11	07:49	07:30	07:30
	21:03	20:22	19:26	18:30	22	18:02 (6)
23	06:01	06:36	07:13	07:50	07:31	07:31
	21:02	20:20	19:24	18:29	23	18:03 (6)
24	06:02	06:38	07:14	07:51	07:32	07:32
	21:01	20:19	19:22	18:27	24	18:03 (6)
25	06:03	06:39	07:15	07:52	07:34	07:34
	21:00	20:17	19:20	18:26	23	18:02 (6)
26	06:05	06:40	07:16	07:54	07:35	07:35
	20:59	20:15	19:18	18:24	21	18:00 (6)
27	06:06	06:41	07:17	07:55	07:36	07:36
	20:58	20:14	19:16	18:23	20	17:58 (6)
28	06:07	06:42	07:19	07:56	07:37	07:37
	20:57	20:12	19:15	18:21	18	17:57 (6)
29	06:08	06:43	07:20	07:58	07:39	07:39
	20:56	20:10	19:13	18:20	16	17:55 (6)
30	06:09	06:45	07:21	07:59	07:40	07:40
	20:55	20:08	19:11	18:18	14	17:54 (6)
31	06:10	06:46	08:01	08:01	17:40 (6)	08:02
	20:54	20:07	18:17	12	17:52 (6)	16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case	362			257	22	946
Sun reduction	0.76			0.63	0.50	0.49
Oper. time red.	0.98			0.98	0.98	0.98
Wind dir. red.	0.56			0.55	0.59	0.71
Total reduction	0.42			0.35	0.29	0.34
Total, real	153			89	6	326

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H355 - H355

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	07:02 17:15	07:41 16:47
2	08:02 16:56	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:47
3	08:02 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:02 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:26 19:03	07:06 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:05	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:57	06:10 20:33	05:42 21:05	05:47 21:13	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:35	05:41 21:06	05:47 21:12	06:18 20:45	06:54 19:54	07:29 18:56	07:10 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:31 18:54	07:11 17:06	07:48 16:45
9	08:01 17:04	07:35 17:45	07:50 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:47	17:19 (41) 17:23 (41)	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:09	06:22 21:11	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	17:17 (41) 17:25 (41)	07:44 19:25	06:48 20:04	06:02 20:41	05:40 21:09	05:51 21:10	06:24 19:44	07:00 18:47	07:35 17:01	07:52 16:45
13	07:59 17:08	07:29 17:50	17:15 (41) 17:26 (41)	07:42 19:27	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:09	06:25 19:43	07:01 18:45	07:37 17:00	07:52 16:45
14	07:59 17:09	07:28 17:52	17:14 (41) 17:28 (41)	07:41 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	07:53 16:46
15	07:58 17:11	07:26 17:53	17:13 (41) 17:29 (41)	07:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:54 16:46
16	07:58 17:12	07:25 17:54	17:13 (41) 17:31 (41)	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:08	06:28 20:31	07:04 19:37	07:41 18:40	07:55 16:46
17	07:57 17:13	07:23 17:56	17:12 (41) 17:32 (41)	07:35 19:32	06:39 20:10	05:56 20:46	05:40 21:12	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:39	07:55 16:46
18	07:57 17:14	07:22 17:57	17:12 (41) 17:34 (41)	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:30 20:28	07:07 19:33	07:43 18:37	07:56 16:47
19	07:56 17:16	07:20 17:59	17:11 (41) 17:35 (41)	07:31 19:34	06:36 20:13	05:54 20:48	05:40 21:12	05:57 21:05	06:32 20:27	07:08 19:31	07:44 18:35	07:57 16:47
20	07:55 17:17	07:18 18:00	17:11 (41) 17:35 (41)	07:30 19:35	06:34 20:14	05:53 20:49	05:40 21:13	05:58 21:04	06:33 20:25	07:09 19:29	07:46 18:34	07:57 16:47
21	07:55 17:18	07:17 18:00	17:12 (41) 17:35 (41)	07:28 19:37	06:32 20:15	05:52 20:51	05:40 21:13	05:59 21:04	06:34 20:23	07:10 19:28	07:47 18:32	07:58 16:48
22	07:54 17:20	07:15 18:01	17:12 (41) 17:34 (41)	07:26 19:38	06:31 20:16	05:51 20:52	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:58 16:48
23	07:53 17:21	07:14 18:03	17:12 (41) 17:33 (41)	07:24 19:39	06:29 20:18	05:50 20:53	05:41 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:50 18:29	07:59 16:49
24	07:52 17:22	07:12 18:04	17:14 (41) 17:33 (41)	07:22 19:40	06:27 20:19	05:49 20:54	05:41 21:14	06:02 21:01	06:37 20:18	07:14 19:22	07:51 18:27	07:59 16:49
25	07:51 17:24	07:10 18:05	17:15 (41) 17:31 (41)	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	08:00 16:50
26	07:51 17:25	07:09 18:07	17:16 (41) 17:29 (41)	07:18 19:43	06:24 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:54 18:24	08:00 16:51
27	07:50 17:26	07:07 18:08	17:20 (41) 17:26 (41)	07:17 19:44	06:23 20:22	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:22	08:00 16:51
28	07:49 17:28	07:05 18:09	07:15 19:45	06:21 20:24	05:46 20:58	05:42 21:14	06:07 20:57	06:42 20:12	06:42 19:14	07:18 18:21	07:56 17:57	08:01 16:52
29	07:48 17:29	07:04 18:09	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	06:43 19:13	07:20 18:19	07:57 17:55	08:01 16:53
30	07:47 17:31	07:03 18:09	07:11 19:48	06:18 20:26	05:45 20:59	05:43 21:14	06:09 20:55	06:44 20:08	06:44 19:11	07:21 18:18	07:59 17:53	08:01 16:54
31	07:45 17:32	07:01 18:09	07:09 19:49	05:44 21:00	05:44 21:00	05:44 21:00	06:10 20:53	06:46 20:06	08:00 18:17	08:00 17:52	08:01 17:52	08:01 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case		281								284		
Sun reduction		0.59								0.63		
Oper. time red.		0.98								0.98		
Wind dir. red.		0.55								0.55		
Total reduction		0.32								0.34		
Total, real		90								97		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H356 - H356

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:39	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:54	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H357 - H357

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:35	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:31	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:39	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:30	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:56
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	07:59
	17:23	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H358 - H358

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09		16:35 (50) 16:47
2	08:01 16:56	07:41 17:35	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:02	07:23 19:07	15	16:35 (50) 16:41
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:29	05:43 21:03	05:45 21:13	06:13 20:49	06:49 20:01	07:24 19:05	14	16:35 (50) 16:42
4	08:01 16:58	07:41 17:38	07:00 18:15	07:02 19:54	06:12 20:31	05:42 21:03	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	13	16:35 (50) 16:46
5	08:01 16:59	07:39 17:39	07:00 18:16	06:56 19:55	07:00 20:32	06:11 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	11	16:36 (50) 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:47 21:12	06:17 20:46	06:52 19:55	07:28 18:58	9	16:36 (50) 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:18 20:44	06:54 19:53	07:29 18:56	7	16:38 (50) 16:45
8	08:01 17:02	07:36 17:43	06:51 18:20	06:55 19:59	06:07 20:36	05:41 21:06	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	5	16:39 (50) 16:45
9	08:00 17:04	07:34 17:45	06:49 19:21	06:53 20:00	06:05 20:37	05:41 21:07	05:49 21:11	06:20 20:41	06:56 19:50	07:32 18:52	2	16:41 (50) 16:49
10	08:00 17:05	07:33 17:46	06:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:50		16:45 16:50
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49		16:45 16:55
12	07:59 17:07	07:30 17:49	06:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47		16:45 16:51
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:01 20:41	05:40 21:09	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45		16:45 16:52
14	07:59 17:09	07:27 17:52	06:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:08	06:26 20:34	07:02 19:40	07:38 18:43		16:45 16:46
15	07:58 17:11	07:26 17:53	06:39 19:29	06:42 20:07	05:58 20:44	05:40 21:10	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42		16:45 16:46
16	07:58 17:12	07:24 17:54	06:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40		16:45 16:46
17	07:57 17:13	07:23 17:56	06:35 19:31	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:06	06:29 20:30	07:05 19:35	07:42 18:38		16:45 16:46
18	07:56 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37		16:45 16:46
19	07:56 17:16	07:20 17:58	06:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:32 20:26	07:08 19:31	07:44 18:35		16:45 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33		16:45 16:47
21	07:54 17:18	07:17 18:00	06:28 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32		16:45 16:48
22	07:54 17:20	07:15 18:01	06:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:02	06:35 20:21	07:11 19:25	07:48 18:30		16:45 16:48
23	07:53 17:21	07:13 18:03	06:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:29		16:45 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:18	05:49 20:53	05:41 21:13	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27		16:45 16:49
25	07:51 17:24	07:10 18:05	06:20 19:41	06:26 20:20	05:49 20:54	05:41 21:13	06:03 21:00	06:39 20:16	07:15 19:20	07:52 18:25		16:45 16:50
26	07:50 17:25	07:08 18:07	06:18 19:43	06:24 20:21	05:48 20:55	05:42 21:13	06:04 20:59	06:40 20:15	07:16 19:18	07:53 18:24	1	17:44 (50) 16:49
27	07:49 17:26	07:07 18:08	06:16 19:44	06:23 20:22	05:47 20:56	05:42 21:13	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:22	10	17:40 (50) 16:49
28	07:48 17:28	07:05 18:09	06:15 19:45	06:21 20:23	05:46 20:57	05:42 21:13	06:07 20:56	06:42 20:11	07:18 19:14	07:56 18:21	13	17:38 (50) 16:48
29	07:47 17:29		06:13 19:46	06:19 20:25	05:46 20:58	05:43 21:13	06:08 20:55	06:43 20:10	07:19 19:12	07:57 18:19	16	17:37 (50) 16:48
30	07:46 17:31		06:11 19:48	06:18 20:26	05:45 20:59	05:43 21:13	06:09 20:54	06:44 20:08	07:21 19:11	07:59 18:18	17	17:36 (50) 16:47
31	07:45 17:32		06:09 19:49	06:17 21:00	05:44 21:00	06:10 20:53	06:46 20:06	08:00 18:16	08:00 17:52 (50)		16	17:36 (50) 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case		146								73		76
Sun reduction		0.59								0.63		0.50
Oper. time red.		0.98								0.98		0.98
Wind dir. red.		0.56								0.56		0.56
Total reduction		0.32								0.34		0.27
Total, real		47								25		21

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H359 - H359

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	7 07:16 (45)	07:22 19:09	07:02 17:16	07:41 16:47
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:44 21:02	05:45 21:14	06:12 20:51	06:48 20:03	07:10 (45)	07:23 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:42 17:37	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:14 20:50	06:49 20:01	07:11 (45)	07:25 19:05	07:04 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	06:13 20:31	05:43 21:04	05:46 21:13	06:15 20:49	06:51 19:59	07:12 (45)	07:26 19:04	07:06 17:11	07:44 16:46
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:32	05:42 21:05	05:47 21:13	06:16 20:47	06:52 19:58		07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:05	05:47 21:13	06:17 20:46	06:53 19:56		07:28 19:00	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	06:09 20:35	05:42 21:06	05:48 21:12	06:18 20:45	06:54 19:54		07:30 18:56	07:10 17:08	07:47 16:46
8	08:01 17:03	07:36 17:44	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:43	06:55 19:52		07:31 18:55	07:11 17:06	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:12	06:20 20:42	06:56 19:50		07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	07:12 (45)	06:05 20:38	05:41 21:08	06:22 20:41	06:58 19:48		07:33 18:51	07:14 17:04	07:50 16:46
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	07:10 (45)	06:03 20:39	05:41 21:11	06:23 20:39	06:59 19:46		07:34 18:49	07:15 17:03	07:51 16:46
12	08:00 17:07	07:31 17:49	07:44 19:26	06:48 20:04	07:08 (45)	06:02 20:41	05:40 21:09	06:24 20:38	07:00 19:45		07:36 18:47	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:05	07:06 (45)	06:01 20:42	05:40 21:10	06:25 20:36	07:01 19:43		07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	07:05 (45)	06:00 20:43	05:40 21:10	06:26 20:35	07:02 19:41		07:38 18:44	07:19 17:00	07:53 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	07:03 (45)	05:59 20:44	05:40 21:11	06:27 20:33	07:03 19:39		07:39 18:42	07:21 16:59	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	07:01 (45)	05:58 20:45	05:40 21:11	06:28 20:32	07:05 19:37		07:41 18:41	07:22 16:58	07:55 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	07:00 (45)	05:57 20:46	05:40 21:12	06:30 20:30	07:06 19:35		07:42 18:39	07:23 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:33 19:33	06:38 20:12	06:58 (45)	05:55 20:47	05:40 21:12	06:31 20:28	07:07 19:33		07:43 18:37	07:25 16:56	07:56 16:47
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	06:56 (45)	05:54 20:49	05:40 21:12	06:32 20:27	07:08 19:32		07:45 18:35	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	06:57 (45)	05:53 20:50	05:40 21:13	06:33 20:25	07:09 19:30	07:08 (45)	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:15	06:58 (45)	05:53 20:51	05:41 21:13	06:34 20:24	07:10 19:28	07:05 (45)	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:16	07:13 (45)	05:52 20:52	05:41 21:13	06:35 20:22	07:12 19:26	07:03 (45)	07:48 18:31	07:30 16:52	07:59 16:49
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	07:03 (45)	05:51 20:53	05:41 21:13	06:37 20:20	07:13 19:24	07:01 (45)	07:50 18:29	07:31 16:52	07:59 16:49
24	07:52 17:23	07:12 18:04	07:22 19:41	06:28 20:19	07:07 (45)	05:50 20:54	05:41 21:14	06:38 20:19	07:14 19:22	07:00 (45)	07:51 18:27	07:32 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:42 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:01 (45)	07:52 18:26	07:33 16:50	08:00 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:25 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:02 (45)	07:54 18:24	07:35 16:50	08:00 16:51
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:17	07:03 (45)	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:42 20:12	07:19 19:15	07:04 (45)	07:56 18:21	07:37 16:49	08:01 16:52
29	07:48 17:30	07:06 19:47	07:13 20:25	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:06 (45)	07:58 18:20	07:38 16:48	08:01 16:53
30	07:47 17:31	07:05 19:48	07:11 20:26	06:18 20:26	05:45 21:00	05:44 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:07 (45)	07:59 18:18	07:40 16:48	08:01 16:54
31	07:46 17:32	07:04 19:49	07:09 20:00	06:17 21:00	05:45 21:00	05:44 20:54	06:10 20:06	06:46 20:06	07:22 19:08	07:08 (45)	08:00 18:17	08:01 16:55	08:01 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377		341	289	276
Total, worst case				177				168	12				
Sun reduction				0.61				0.74	0.69				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.55				0.55	0.55				
Total reduction				0.33				0.40	0.37				
Total, real				58				67	4				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H360 - H360

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:01	07:44	07:04	07:24 (52)	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:56 (52)	07:01	07:40
	16:56	17:34	18:11	32 07:56 (52)	19:50	20:27	21:01	21:13	20:52	20:04	19:09	35 08:31 (52)	17:15	16:47
2	08:01	07:43	07:02	07:22 (52)	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:54 (52)	07:03	07:41
	16:57	17:35	18:12	34 07:56 (52)	19:52	20:28	21:02	21:13	20:51	20:03	19:07	37 08:31 (52)	17:14	16:47
3	08:01	07:42	07:00	07:21 (52)	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:53 (52)	07:04	07:43
	16:58	17:36	18:14	36 07:57 (52)	19:53	20:30	21:03	21:13	20:50	20:01	19:05	38 08:31 (52)	17:13	16:46
4	08:01	07:41	06:58	07:19 (52)	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:53 (52)	07:05	07:44
	16:59	17:38	18:15	38 07:57 (52)	19:54	20:31	21:04	21:13	20:48	19:59	19:03	39 08:32 (52)	17:11	16:46
5	08:01	07:40	06:57	07:17 (52)	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:52 (52)	07:07	07:45
	17:00	17:39	18:16	40 07:57 (52)	19:55	20:32	21:04	21:13	20:47	19:57	19:01	40 08:32 (52)	17:10	16:46
6	08:01	07:38	06:55	07:15 (52)	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:51 (52)	07:08	07:46
	17:01	17:41	18:17	41 07:56 (52)	19:56	20:33	21:05	21:12	20:46	19:55	19:00	41 08:32 (52)	17:09	16:46
7	08:01	07:37	06:53	07:15 (52)	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:50 (52)	07:09	07:47
	17:02	17:42	18:19	41 07:56 (52)	19:58	20:34	21:06	21:12	20:44	19:54	18:56	42 08:32 (52)	17:07	16:46
8	08:01	07:36	07:51	08:15 (52)	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:52 (52)	07:11	07:48
	17:03	17:43	18:20	41 08:56 (52)	19:59	20:36	21:06	21:12	20:43	19:52	18:54	40 08:32 (52)	17:06	16:45
9	08:01	07:34	07:50	08:15 (52)	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:53 (52)	07:12	07:49
	17:04	17:45	19:21	40 08:55 (52)	20:00	20:37	21:07	21:11	20:42	19:50	18:52	39 08:32 (52)	17:05	16:45
10	08:00	07:33	07:48	08:15 (52)	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:54 (52)	07:14	07:50
	17:05	17:46	19:23	39 08:54 (52)	20:01	20:38	21:08	21:11	20:40	19:48	18:51	37 08:31 (52)	17:04	16:45
11	08:00	07:32	07:46	08:15 (52)	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:55 (52)	07:15	07:51
	17:06	17:48	19:24	38 08:53 (52)	20:03	20:39	21:08	21:10	20:39	19:46	18:49	35 08:30 (52)	17:03	16:45
12	08:00	07:30	07:44	08:16 (52)	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:57 (52)	07:16	07:51
	17:07	17:49	19:25	36 08:52 (52)	20:04	20:40	21:09	21:10	20:37	19:44	18:47	33 08:30 (52)	17:02	16:45
13	07:59	07:29	07:42	08:17 (52)	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:58 (52)	07:18	07:52
	17:08	17:50	19:27	34 08:51 (52)	20:05	20:41	21:10	21:09	20:36	19:43	18:45	31 08:29 (52)	17:00	16:46
14	07:59	07:27	07:41	08:18 (52)	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:59 (52)	07:19	07:53
	17:10	17:52	19:28	31 08:49 (52)	20:06	20:43	21:10	21:09	20:34	19:41	18:44	29 08:28 (52)	16:59	16:46
15	07:58	07:26	07:39	08:19 (52)	06:42	05:58	05:40	05:54	06:27	07:03	07:39	08:01 (52)	07:20	07:54
	17:11	17:53	19:29	29 08:48 (52)	20:08	20:44	21:11	21:08	20:33	19:39	18:42	27 08:28 (52)	16:58	16:46
16	07:58	07:24	07:37	08:20 (52)	06:41	05:57	05:40	05:55	06:28	07:04	07:40	08:02 (52)	07:22	07:55
	17:12	17:55	19:30	25 08:45 (52)	20:09	20:45	21:11	21:07	20:31	19:37	18:40	24 08:26 (52)	16:57	16:46
17	07:57	07:23	07:35	08:22 (52)	06:39	05:56	05:40	05:56	06:29	07:05	07:42	08:03 (52)	07:23	07:55
	17:13	17:56	19:32	20 08:42 (52)	20:10	20:46	21:11	21:07	20:30	19:35	18:39	21 08:24 (52)	16:56	16:46
18	07:57	07:21	07:33	08:25 (52)	06:37	05:55	05:40	05:57	06:31	07:07	07:43	08:05 (52)	07:24	07:56
	17:15	17:57	19:33	14 08:39 (52)	20:11	20:47	21:12	21:06	20:28	19:33	18:37	18 08:23 (52)	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:40	05:58	06:32	07:08	07:44	08:06 (52)	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	15 08:21 (52)	16:55	16:47	
20	07:55	07:18	07:30	06:34	05:53	05:40	05:40	05:59	06:33	07:09	07:46	08:07 (52)	07:27	07:57
	17:17	18:00	2 07:41 (52)	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	11 08:18 (52)	16:54	16:48
21	07:55	07:17	07:38 (52)	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	08:09 (52)	07:28	07:58
	17:18	18:00	8 07:46 (52)	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	7 08:16 (52)	16:53	16:48
22	07:54	07:15	07:36 (52)	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	08:03 (52)	07:29	07:58
	17:20	18:01	13 07:49 (52)	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30		16:52	16:48
23	07:53	07:14	07:34 (52)	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49		07:31	07:59
	17:21	18:03	16 07:50 (52)	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29		16:52	16:49
24	07:52	07:12	07:33 (52)	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51		07:32	07:59
	17:22	18:04	19 07:52 (52)	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27		16:51	16:50
25	07:51	07:10	07:31 (52)	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	08:10 (52)	07:33	08:00
	17:24	18:05	22 07:53 (52)	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	11 08:21 (52)	16:50	16:50
26	07:50	07:09	07:29 (52)	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	08:06 (52)	07:34	08:00
	17:25	18:07	25 07:54 (52)	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	18 08:24 (52)	16:50	16:51
27	07:49	07:07	07:28 (52)	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:54	08:02 (52)	07:35	08:00
	17:27	18:08	28 07:56 (52)	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:24	24 08:26 (52)	16:49	16:52
28	07:48	07:05	07:26 (52)	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	08:00 (52)	07:37	08:01
	17:28	18:10	30 07:56 (52)	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	27 08:27 (52)	16:49	16:52
29	07:47			07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:59 (52)	07:38	08:01
	17:29			19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	31 08:30 (52)	16:48	16:53
30	07:46			07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:57 (52)	07:39	08:01
	17:31			19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	33 08:30 (52)	16:48	16:54
31	07:45			07:09		05:45		06:10	06:46		08:00		08:01	08:01
	17:32			19:49		21:00		20:53	20:06		18:17		16:48	16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276		
Total, worst case		163	609						144	639				
Sun reduction		0.59	0.59						0.69	0.63				
Oper. time red.		0.98	0.98						0.98	0.98				
Wind dir. red.		0.62	0.62						0.62	0.62				
Total reduction		0.36	0.36						0.42	0.38				
Total, real		59	219						61	246				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H361 - H361

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including sunrise/sunset times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H362 - H362

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	08:26 (57)	07:44	07:04	07:24 (58)	07:08
	16:56	7 08:33 (57)	17:34	18:11	4 07:28 (58)	19:50
2	08:01	08:26 (57)	07:43	07:02	07:22 (58)	07:06
	16:57	8 08:34 (57)	17:35	18:12	7 07:29 (58)	19:52
3	08:01	08:26 (57)	07:42	07:00	07:21 (58)	07:04
	16:58	9 08:35 (57)	17:36	18:14	9 07:30 (58)	19:53
4	08:01	08:26 (57)	07:41	06:58	07:19 (58)	07:02
	16:59	10 08:36 (57)	17:38	18:15	10 07:29 (58)	19:54
5	08:01	08:25 (57)	07:40	06:57	07:17 (58)	07:00
	17:00	10 08:35 (57)	17:39	18:16	12 07:29 (58)	19:55
6	08:01	08:25 (57)	07:38	06:55	07:15 (58)	06:58
	17:01	11 08:36 (57)	17:41	18:18	13 07:28 (58)	19:57
7	08:01	08:25 (57)	07:37	06:53	07:14 (58)	06:57
	17:02	12 08:37 (57)	17:42	18:19	14 07:28 (58)	19:58
8	08:01	08:25 (57)	07:36	07:51	08:13 (58)	06:55
	17:03	13 08:38 (57)	17:43	18:20	14 08:27 (58)	19:59
9	08:01	08:24 (57)	07:34	07:50	08:14 (58)	06:53
	17:04	14 08:38 (57)	17:45	19:21	10 08:24 (58)	20:00
10	08:00	08:24 (57)	07:33	07:48	08:17 (58)	06:51
	17:05	16 08:40 (57)	17:46	19:23	3 08:20 (58)	20:01
11	08:00	08:24 (57)	07:32	07:46	06:50	06:03
	17:06	17 08:41 (57)	17:48	19:24	20:03	20:39
12	08:00	08:23 (57)	07:30	07:44	06:48	06:02
	17:07	18 08:41 (57)	17:49	19:25	20:04	20:40
13	07:59	08:23 (57)	07:29	07:42	06:46	06:01
	17:08	19 08:42 (57)	17:50	19:27	20:05	20:42
14	07:59	08:22 (57)	07:27	07:41	06:44	06:00
	17:10	20 08:42 (57)	17:52	19:28	20:06	20:43
15	07:58	08:21 (57)	07:26	07:39	06:43	05:59
	17:11	21 08:42 (57)	17:53	19:29	20:08	20:44
16	07:58	08:21 (57)	07:25	07:37	06:41	05:58
	17:12	22 08:43 (57)	17:55	19:30	20:09	20:45
17	07:57	08:20 (57)	07:23	07:35	06:39	05:56
	17:13	23 08:43 (57)	17:56	19:32	20:10	20:46
18	07:57	08:20 (57)	07:22	07:33	06:37	05:55
	17:15	24 08:44 (57)	17:57	19:33	20:11	20:47
19	07:56	08:19 (57)	07:20	07:31	06:36	05:54
	17:16	25 08:44 (57)	17:59	19:34	20:13	20:48
20	07:55	08:19 (57)	07:18	07:30	06:34	05:53
	17:17	24 08:43 (57)	18:00	19:35	20:14	20:49
21	07:55	08:20 (57)	07:17	07:28	06:32	05:52
	17:19	23 08:43 (57)	18:00	19:37	20:15	20:50
22	07:54	08:20 (57)	07:15	07:26	06:31	05:52
	17:20	23 08:43 (57)	18:02	19:38	20:16	20:51
23	07:53	08:21 (57)	07:14	07:24	06:29	05:51
	17:21	22 08:43 (57)	18:03	19:39	20:17	20:53
24	07:52	08:23 (57)	07:12	07:22	06:28	05:50
	17:23	20 08:43 (57)	18:04	19:40	20:19	20:54
25	07:51	08:24 (57)	07:10	07:20	06:26	05:49
	17:24	18 08:42 (57)	18:06	19:42	20:20	20:55
26	07:50	08:25 (57)	07:09	07:19	06:24	05:48
	17:25	17 08:42 (57)	18:07	19:43	20:21	20:56
27	07:49	08:26 (57)	07:07	07:17	06:23	05:47
	17:27	14 08:40 (57)	18:08	19:44	20:22	20:56
28	07:48	08:29 (57)	07:05	07:15	06:21	05:47
	17:28	10 08:39 (57)	18:10	19:45	20:24	20:57
29	07:47			07:13	06:20	05:46
	17:29			19:47	20:25	20:58
30	07:46			07:11	06:18	05:45
	17:31			19:48	20:26	20:59
31	07:45			07:09		05:45
	17:32			19:49		21:00
Potential sun hours	288	292	369	403	458	464
Total, worst case	470	1	96			
Sun reduction	0.57	0.59	0.59			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.69	0.62	0.62			
Total reduction	0.39	0.36	0.36			
Total, real	182	0	35			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H362 - H362

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:01	07:40
	21:13	20:52	20:04	19:09	17:15	16:47
2	05:45	06:12	06:48	07:23	07:03	07:41
	21:13	20:51	20:03	19:07	17:14	16:47
3	05:45	06:14	06:49	07:24	07:04	07:43
	21:13	20:50	20:01	19:05	17:13	16:47
4	05:46	06:15	06:50	07:26	07:53 (58)	07:06
	21:13	20:48	19:59	19:03	8 08:01 (58)	17:11
5	05:46	06:16	06:52	07:27	07:50 (58)	07:07
	21:13	20:47	19:57	19:02	13 08:03 (58)	17:10
6	05:47	06:17	06:53	07:28	07:49 (58)	07:08
	21:12	20:46	19:55	19:00	14 08:03 (58)	17:09
7	05:48	06:18	06:54	07:29	07:50 (58)	07:10
	21:12	20:44	19:54	18:56	14 08:04 (58)	17:07
8	05:49	06:19	06:55	07:31	07:52 (58)	07:11
	21:12	20:43	19:52	18:54	13 08:05 (58)	17:06
9	05:49	06:20	06:56	07:32	07:53 (58)	07:12
	21:11	20:42	19:50	18:53	11 08:04 (58)	17:05
10	05:50	06:21	06:57	07:33	07:54 (58)	07:14
	21:11	20:40	19:48	18:51	10 08:04 (58)	17:04
11	05:51	06:23	06:59	07:34	07:55 (58)	07:15
	21:10	20:39	19:46	18:49	8 08:03 (58)	17:03
12	05:52	06:24	07:00	07:35	07:57 (58)	07:16
	21:10	20:37	19:44	18:47	6 08:03 (58)	17:02
13	05:52	06:25	07:01	07:37	07:58 (58)	07:18
	21:09	20:36	19:43	18:46	3 08:01 (58)	17:01
14	05:53	06:26	07:02	07:38	07:19	08:00 (57)
	21:09	20:34	19:41	18:44	11 17:00	08:11 (57)
15	05:54	06:27	07:03	07:39	07:20	07:58 (57)
	21:08	20:33	19:39	18:42	14 16:59	08:12 (57)
16	05:55	06:28	07:04	07:41	07:22	07:58 (57)
	21:07	20:31	19:37	18:40	17 16:58	08:15 (57)
17	05:56	06:30	07:06	07:42	07:23	07:57 (57)
	21:07	20:30	19:35	18:39	18 16:57	08:15 (57)
18	05:57	06:31	07:07	07:43	07:24	07:57 (57)
	21:06	20:28	19:33	18:37	20 16:56	08:17 (57)
19	05:58	06:32	07:08	07:44	07:26	07:56 (57)
	21:05	20:27	19:31	18:35	22 16:55	08:18 (57)
20	05:59	06:33	07:09	07:46	07:27	07:55 (57)
	21:04	20:25	19:29	18:34	23 16:54	08:18 (57)
21	06:00	06:34	07:10	07:47	07:28	07:56 (57)
	21:03	20:23	19:28	18:32	23 16:53	08:19 (57)
22	06:01	06:35	07:11	07:48	07:29	07:55 (57)
	21:03	20:22	19:26	18:30	24 16:52	08:19 (57)
23	06:02	06:37	07:13	07:50	07:31	07:55 (57)
	21:02	20:20	19:24	18:29	25 16:52	08:20 (57)
24	06:03	06:38	07:14	07:51	07:32	07:57 (57)
	21:01	20:18	19:22	18:27	24 16:51	08:21 (57)
25	06:04	06:39	07:15	07:52	07:33	07:58 (57)
	21:00	20:17	19:20	18:26	23 16:50	08:21 (57)
26	06:05	06:40	07:16	07:53	07:34	07:59 (57)
	20:59	20:15	19:18	18:24	22 16:50	08:21 (57)
27	06:06	06:41	07:17	07:55	07:36	08:01 (57)
	20:58	20:13	19:16	18:23	21 16:49	08:22 (57)
28	06:07	06:42	07:18	07:56	07:37	08:02 (57)
	20:57	20:12	19:14	18:21	20 16:49	08:22 (57)
29	06:08	06:43	07:20	07:57	07:38	08:03 (57)
	20:56	20:10	19:13	18:20	19 16:48	08:22 (57)
30	06:09	06:45	07:21	07:59	07:39	08:04 (57)
	20:54	20:08	19:11	18:18	18 16:48	08:22 (57)
31	06:10	06:46		08:00		08:01
	20:53	20:06		18:17		16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case				100	346	203
Sun reduction				0.63	0.50	0.49
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.62	0.69	0.69
Total reduction				0.38	0.34	0.33
Total, real				38	118	68

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H363 - H363

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H364 - H364

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47	
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43	
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46	
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44	
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46	
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46	
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46	
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46	
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47	
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45	
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45	
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49	
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45	
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50	
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:48	18:51	17:04	16:45	
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51	
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45	
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52	
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45	
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53	
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45	
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54	08:32 (2)
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45	5 08:37 (2)
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55	08:32 (2)
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46	7 08:39 (2)
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55	08:32 (2)
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46	8 08:40 (2)
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56	08:31 (2)
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46	9 08:40 (2)
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57	08:32 (2)
	17:14	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:33	18:37	16:55	16:47	9 08:41 (2)
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57	08:33 (2)
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47	9 08:42 (2)
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58	08:32 (2)
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47	10 08:42 (2)
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58	08:33 (2)
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48	10 08:43 (2)
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59	08:33 (2)
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48	10 08:43 (2)
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59	08:34 (2)
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49	10 08:44 (2)
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00	08:35 (2)
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49	9 08:44 (2)
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00	08:35 (2)
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	9 08:44 (2)
26	07:51	07:09	07:19	06:24	05:48	05:41	06:05	06:40	07:16	07:54	07:35	08:01	08:36 (2)
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51	9 08:45 (2)
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01	08:37 (2)
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:23	16:49	16:51	8 08:45 (2)
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01	08:38 (2)
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52	7 08:45 (2)
29	07:48	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01	08:39 (2)
	17:29	18:11	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53	5 08:44 (2)
30	07:47	07:11	07:21	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02	08:40 (2)
	17:31	18:13	19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54	3 08:43 (2)
31	07:46	07:10	07:20	06:17	05:44	05:41	06:10	06:46	07:22	07:60	07:41	08:02	
	17:32	18:14	19:49	20:28	21:01	21:15	20:54	20:07	19:10	18:17	16:47	16:54	
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276	
Total, worst case													137
Sun reduction													0.49
Oper. time red.													0.98
Wind dir. red.													0.70
Total reduction													0.34
Total, real													46

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H365 - H365

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H366 - H366

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:55	16:46
19	07:56	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:22	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H367 - H367

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:46	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:02
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H368 - H368

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
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	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
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	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:46	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H369 - H369

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including start/end times and potential sun hours.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout with columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time).

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H370 - H370

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
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25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H371 - H371

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H372 - H372

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:48
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:49
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:59
	17:18	18:00	19:37	20:15	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:12	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	08:00
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H373 - H373

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:46
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H374 - H374

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:51	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:47
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:48
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:49
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:27	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:59
	17:18	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	08:00
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:28	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H375 - H375

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:45
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
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	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:43	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H376 - H376

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:31	21:04	21:14	20:51	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:18	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
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	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H377 - H377

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
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28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:38	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
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Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
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Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H378 - H378

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:46
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:02	16:45
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:57	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H379 - H379

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:31	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:18	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:39	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:44	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H380 - H380

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H381 - H381

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H382 - H382

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H383 - H383

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H384 - H384

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
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30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
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Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H385 - H385

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:46
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H386 - H386

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H387 - H387

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H388 - H388

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H389 - H389

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H390 - H390

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H391 - H391

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09	07:02 17:16	07:41 16:47
2	08:02 16:57	07:44 17:35	07:02 18:13	07:06 19:52	06:16 20:29	05:44 21:03	05:45 21:14	06:12 20:51	06:48 20:03	07:24 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:43 17:37	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:50 20:01	07:25 19:06	07:05 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:55	06:13 20:31	05:43 21:04	05:46 21:14	06:15 20:49	06:51 20:00	07:26 19:04	07:06 17:11	07:44 16:46
5	08:02 17:00	07:40 17:39	06:57 18:17	07:00 19:56	06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:29 19:00	07:09 17:09	07:46 16:46
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:09 20:35	05:41 21:07	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:08	07:47 16:46
8	08:02 17:03	07:36 17:44	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:44	06:55 19:52	07:31 18:55	07:11 17:06	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:57 19:50	07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:34 17:46	07:48 19:23	06:52 20:02	06:05 20:39	05:41 21:09	05:50 21:12	06:22 20:41	06:58 19:49	07:33 18:51	07:14 17:04	07:50 16:46
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:40	05:40 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:16 17:03	07:51 16:46
12	08:00 17:07	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	05:40 21:10	05:52 21:11	06:24 20:38	07:00 19:45	07:36 18:48	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:20 17:00	07:54 16:46
15	07:59 17:11	07:27 17:53	07:39 19:30	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:04 19:39	07:40 18:42	07:21 16:59	07:55 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 20:46	05:40 21:12	05:55 21:08	06:29 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:55 16:46
17	07:58 17:13	07:24 17:56	07:35 19:32	06:39 20:11	05:56 20:47	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:35	07:42 18:39	07:24 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	05:55 20:48	05:40 21:13	05:57 21:07	06:31 20:29	07:07 19:34	07:44 18:37	07:25 16:56	07:57 16:47
19	07:57 17:16	07:20 17:59	07:32 19:35	06:36 20:13	05:54 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:36	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	05:53 20:50	05:40 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:16	05:52 20:51	05:40 21:13	06:00 21:04	06:34 20:24	07:11 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:52 20:52	05:41 21:14	06:01 21:03	06:36 20:22	07:12 19:26	07:49 18:31	07:30 16:52	07:59 16:49
23	07:54 17:21	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:21	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49
24	07:53 17:23	07:12 18:04	07:23 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:27	07:33 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:42 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:53 18:26	07:34 16:50	08:00 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:25 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:19	07:54 18:24	07:35 16:50	08:01 16:51
27	07:50 17:27	07:07 18:09	07:17 19:45	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:18 19:17	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:43 20:12	07:19 19:15	07:57 18:21	07:38 16:49	08:01 16:52
29	07:48 17:30	07:05 18:13	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:02 16:53
30	07:47 17:31	07:04 18:16	07:11 19:48	06:18 20:27	05:45 21:00	05:44 21:14	06:09 20:55	06:45 20:09	07:21 19:11	07:59 18:18	07:40 16:48	08:02 16:54
31	07:46 17:32	07:03 19:50	07:10 19:50	06:17 21:01	05:45 21:01	05:45 21:14	06:10 20:54	06:46 20:07	08:01 18:17	08:01 17:02	08:02 16:55	08:02 16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H392 - H392

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
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	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
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	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
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	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
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19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
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	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H393 - H393

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09	07:02 17:16	07:41 16:47
2	08:02 16:57	07:44 17:35	07:02 18:13	07:06 19:52	06:16 20:29	05:44 21:03	05:45 21:14	06:12 20:51	06:48 20:03	07:24 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:43 17:37	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:50 20:01	07:25 19:06	07:05 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:55	06:13 20:31	05:43 21:04	05:46 21:14	06:15 20:49	06:51 20:00	07:26 19:04	07:06 17:11	07:44 16:46
5	08:02 17:00	07:40 17:39	06:57 18:17	07:00 19:56	06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:29 19:00	07:09 17:09	07:46 16:46
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:09 20:35	05:41 21:07	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:08	07:47 16:46
8	08:02 17:03	07:36 17:44	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:44	06:55 19:52	07:31 18:55	07:11 17:06	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:57 19:50	07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:34 17:46	07:48 19:23	06:52 20:02	06:05 20:39	05:41 21:09	05:50 21:12	06:22 20:41	06:58 19:49	07:33 18:51	07:14 17:04	07:50 16:46
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:40	05:40 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:16 17:03	07:51 16:46
12	08:00 17:07	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	05:40 21:10	05:52 21:11	06:24 20:38	07:00 19:45	07:36 18:48	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:20 17:00	07:54 16:46
15	07:59 17:11	07:27 17:53	07:39 19:30	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:04 19:39	07:40 18:42	07:21 16:59	07:55 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 20:46	05:40 21:12	05:55 21:08	06:29 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:55 16:46
17	07:58 17:13	07:24 17:56	07:35 19:32	06:39 20:11	05:56 20:47	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:35	07:42 18:39	07:24 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	05:55 20:48	05:40 21:13	05:57 21:07	06:31 20:29	07:07 19:34	07:44 18:37	07:25 16:56	07:57 16:47
19	07:57 17:16	07:20 17:59	07:32 19:35	06:36 20:13	05:54 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:36	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	05:53 20:50	05:40 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:16	05:52 20:51	05:40 21:13	06:00 21:04	06:34 20:24	07:11 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:52 20:52	05:41 21:14	06:01 21:03	06:36 20:22	07:12 19:26	07:49 18:31	07:30 16:52	07:59 16:49
23	07:54 17:21	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:21	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49
24	07:53 17:23	07:12 18:04	07:23 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:27	07:33 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:42 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:53 18:26	07:34 16:50	08:00 16:50
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29	07:48 17:30	07:05 19:47	07:13 20:25	06:20 20:59	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:02 16:53
30	07:47 17:31	07:04 19:48	07:11 20:27	06:18 21:00	05:45 21:00	05:44 21:14	06:09 20:55	06:45 20:09	07:21 19:11	07:59 18:18	07:40 16:48	08:02 16:54
31	07:46 17:32	07:03 19:50	07:10 20:27	06:17 21:01	05:45 21:01	05:44 20:54	06:10 20:07	06:46 20:07	08:01 18:17	08:02 16:55	08:02 16:55	08:02 16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H394 - H394

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
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	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
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10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H395 - H395

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H396 - H396

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
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25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H397 - H397

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H398 - H398

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H399 - H399

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H400 - H400

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H401 - H401

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H402 - H402

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H403 - H403

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H404 - H404

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H405 - H405

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H406 - H406

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 948 364 341 373 483 625 1,207 923 579 685 869 1,169 8,564
 Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09	07:02 17:16	07:41 16:47
2	08:02 16:57	07:44 17:35	07:02 18:13	07:06 19:52	06:16 20:29	05:44 21:03	05:45 21:14	06:13 20:51	06:48 20:03	07:24 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:43 17:37	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:50 20:01	07:25 19:06	07:05 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:55	06:13 20:31	05:43 21:04	05:46 21:14	06:15 20:49	06:51 20:00	07:26 19:04	07:06 17:12	07:44 16:46
5	08:02 17:00	07:40 17:39	06:57 18:17	07:01 19:56	06:11 20:33	05:42 21:05	05:47 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:29 19:00	07:09 17:09	07:46 16:46
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:09 20:35	05:42 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:08	07:47 16:46
8	08:02 17:03	07:36 17:44	07:52 18:21	06:55 20:00	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:44	06:55 19:52	07:31 18:55	07:11 17:06	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:21 20:42	06:57 19:50	07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:34 17:47	07:48 19:23	06:52 20:02	06:05 20:39	05:41 21:08	05:50 21:11	06:22 20:41	06:58 19:49	07:33 18:51	07:14 17:04	07:50 16:46
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:40	05:41 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:16 17:03	07:51 16:46
12	08:00 17:07	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	05:40 21:10	05:52 21:10	06:24 20:38	07:00 19:45	07:36 18:48	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:53 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:45 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:20 17:00	07:54 16:46
15	07:59 17:11	07:27 17:54	07:39 19:30	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:04 19:39	07:40 18:42	07:21 16:59	07:55 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 20:46	05:40 21:12	05:55 21:08	06:29 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:55 16:46
17	07:58 17:14	07:24 17:56	07:36 19:32	06:39 20:11	05:57 20:47	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:36	07:42 18:39	07:24 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	05:56 20:48	05:40 21:12	05:57 21:07	06:31 20:29	07:07 19:34	07:44 18:37	07:25 16:56	07:57 16:47
19	07:57 17:16	07:20 17:59	07:32 19:35	06:36 20:13	05:55 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:36	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	05:54 20:50	05:40 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:16	05:53 20:51	05:41 21:13	06:00 21:04	06:34 20:24	07:11 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:52 20:52	05:41 21:14	06:01 21:03	06:36 20:22	07:12 19:26	07:49 18:31	07:30 16:53	07:59 16:49
23	07:54 17:21	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:21	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49
24	07:53 17:23	07:12 18:05	07:23 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:28	07:33 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:42 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:53 18:26	07:34 16:50	08:00 16:50
26	07:51 17:26	07:09 18:07	07:19 19:43	06:25 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:19	07:54 18:24	07:35 16:50	08:01 16:51
27	07:50 17:27	07:07 18:09	07:17 19:45	06:23 20:23	05:48 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:18 19:17	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:22 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:43 20:12	07:19 19:15	07:57 18:21	07:37 16:49	08:01 16:52
29	07:48 17:30		07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:01 16:53
30	07:47 17:31		07:12 19:48	06:19 20:27	05:45 21:00	05:44 21:14	06:09 20:55	06:45 20:09	07:21 19:11	07:59 18:18	07:40 16:48	08:02 16:54
31	07:46 17:32		07:10 19:50		05:45 21:01		06:10 20:54	06:46 20:07		08:01 18:17		08:02 16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H407 - H407

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H408 - H408

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H409 - H409

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:56	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
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	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H410 - H410

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H411 - H411

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H412 - H412

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H413 - H413

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H414 - H414

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H415 - H415

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H416 - H416

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H417 - H417

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H418 - H418

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H419 - H419

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H420 - H420

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the year (1-31), showing sun rise and set times.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H421 - H421

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H422 - H422

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H423 - H423

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H424 - H424

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H425 - H425

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H426 - H426

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H427 - H427

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H428 - H428

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H429 - H429

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H430 - H430

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
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	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
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	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H431 - H431

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H432 - H432

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H433 - H433

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H434 - H434

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H435 - H435

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H436 - H436

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
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12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H437 - H437

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
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	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
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	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
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	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
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	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
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	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
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	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
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	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
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	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
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	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
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	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H438 - H438

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H439 - H439

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H440 - H440

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H441 - H441

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H442 - H442

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H443 - H443

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H444 - H444

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H445 - H445

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H446 - H446

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H447 - H447

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H448 - H448

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H449 - H449

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H450 - H450

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H451 - H451

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H452 - H452

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:56	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:25	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H453 - H453

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
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	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H454 - H454

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H455 - H455

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H456 - H456

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H457 - H457

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H458 - H458

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H459 - H459

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H460 - H460

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H461 - H461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 1 row of values: 0.57, 0.59, 0.59, 0.61, 0.65, 0.70, 0.76, 0.74, 0.69, 0.63, 0.50, 0.49

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 1 row of values: 948, 364, 341, 373, 483, 625, 1,207, 923, 579, 685, 869, 1,169, 8,564

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, showing sun rise and set times.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H462 - H462

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:12 20:53	06:47 20:05	07:22 19:09	07:02 17:16	07:41 16:48
2	08:02 16:57	07:44 17:35	07:02 18:13	07:06 19:52	06:16 20:29	05:44 21:03	05:45 21:14	06:13 20:51	06:48 20:03	07:24 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:43 17:37	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:50 20:01	07:25 19:06	07:05 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:55	06:13 20:31	05:43 21:04	05:46 21:14	06:15 20:49	06:51 20:00	07:26 19:04	07:06 17:12	07:44 16:47
5	08:02 17:00	07:40 17:40	06:57 18:17	07:01 19:56	06:11 20:33	05:42 21:05	05:47 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:29 19:00	07:09 17:09	07:46 16:46
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:09 20:35	05:42 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:57	07:10 17:08	07:47 16:46
8	08:01 17:03	07:36 17:44	07:52 18:21	06:55 20:00	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:44	06:55 19:52	07:31 18:55	07:11 17:07	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:21 20:42	06:57 19:50	07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:34 17:47	07:48 19:23	06:52 20:02	06:05 20:39	05:41 21:08	05:50 21:11	06:22 20:41	06:58 19:49	07:33 18:51	07:14 17:04	07:50 16:46
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:04 20:40	05:41 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:16 17:03	07:51 16:46
12	08:00 17:08	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	05:41 21:10	05:52 21:10	06:24 20:38	07:00 19:45	07:36 18:48	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:53 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:45 20:07	06:00 20:43	05:40 21:11	05:54 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:20 17:00	07:54 16:46
15	07:59 17:11	07:27 17:54	07:39 19:30	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:09	06:28 20:33	07:04 19:39	07:40 18:42	07:21 16:59	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 20:46	05:40 21:12	05:55 21:08	06:29 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:55 16:47
17	07:58 17:14	07:24 17:56	07:36 19:32	06:39 20:11	05:57 20:47	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:36	07:42 18:39	07:24 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	05:56 20:48	05:40 21:12	05:57 21:07	06:31 20:29	07:07 19:34	07:44 18:37	07:25 16:56	07:57 16:47
19	07:57 17:16	07:20 17:59	07:32 19:35	06:36 20:13	05:55 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:36	07:26 16:55	07:57 16:47
20	07:56 17:18	07:19 18:00	07:30 19:36	06:34 20:14	05:54 20:50	05:41 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:16	05:53 20:51	05:41 21:13	06:00 21:04	06:35 20:24	07:11 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:52 20:52	05:41 21:14	06:01 21:03	06:36 20:22	07:12 19:26	07:49 18:31	07:30 16:53	07:59 16:49
23	07:54 17:22	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:21	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49
24	07:53 17:23	07:12 18:05	07:23 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:28	07:33 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:42 21:14	06:04 21:00	06:39 20:17	07:15 19:21	07:53 18:26	07:34 16:51	08:00 16:51
26	07:51 17:26	07:09 18:07	07:19 19:43	06:25 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:17 19:19	07:54 18:25	07:35 16:50	08:01 16:51
27	07:50 17:27	07:07 18:09	07:17 19:45	06:23 20:23	05:48 20:57	05:42 21:14	06:06 20:58	06:42 20:14	07:18 19:17	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:22 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:43 20:12	07:19 19:15	07:57 18:21	07:37 16:49	08:01 16:53
29	07:48 17:30	07:05 19:47	07:13 20:25	06:20 20:59	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:01 16:53
30	07:47 17:31	07:04 19:48	07:12 20:27	06:19 21:00	05:46 21:00	05:44 21:14	06:09 20:55	06:45 20:09	07:21 19:11	07:59 18:19	07:40 16:48	08:02 16:54
31	07:46 17:33	07:03 19:50	07:10 20:28	06:18 21:01	05:45 21:01	05:44 20:54	06:10 20:07	06:46 20:07	07:22 18:17	08:01 17:08	08:02 16:55	08:02 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H463 - H463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 1 row of values: 0.57, 0.59, 0.59, 0.61, 0.65, 0.70, 0.76, 0.74, 0.69, 0.63, 0.50, 0.49

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 1 row of values: 948, 364, 341, 373, 483, 625, 1,207, 923, 579, 685, 869, 1,169, 8,564

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (January-December) and rows for days (1-31). Includes summary rows for Potential sun hours, Total, worst case, Sun reduction, Oper. time red., Wind dir. red., Total reduction, and Total, real.

Table layout: For each day in each month the following matrix apply

Matrix with 4 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H464 - H464

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 1 row of values: 0.57, 0.59, 0.59, 0.61, 0.65, 0.70, 0.76, 0.74, 0.69, 0.63, 0.50, 0.49

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 1 row of values: 948, 364, 341, 373, 483, 625, 1,207, 923, 579, 685, 869, 1,169, 8,564

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (January-December) and rows for each day (1-31) showing sun rise/set times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Summary table with 4 columns: Day in month, Sun rise/set times, Minutes with flicker, and First/Last time with flicker (WTG causing flicker).

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H465 - H465

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H466 - H466

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the year (1-31), showing sun rise and set times.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise/set times, Minutes with flicker, First/Last time with flicker, and WTG causing flicker times.

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H467 - H467

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 948 364 341 373 483 625 1,207 923 579 685 869 1,169 8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H468 - H468

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H469 - H469

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H470 - H470

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
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	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H471 - H471

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H472 - H472

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H473 - H473

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H474 - H474

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H475 - H475

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H476 - H476

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
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25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H477 - H477

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H478 - H478

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H479 - H479

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H480 - H480

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H481 - H481

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H482 - H482

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H483 - H483

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H484 - H484

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H485 - H485

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H486 - H486

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
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	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H487 - H487

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H488 - H488

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H489 - H489

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
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	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H490 - H490

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H491 - H491

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H492 - H492

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:20	06:56	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:25	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:11	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H493 - H493

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H494 - H494

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:12	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:20	06:56	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:11	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H495 - H495

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H496 - H496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
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	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
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	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
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	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
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26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V117-3.3 80m HH v24Shadow receptor: H497 - H497

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
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	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
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	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:07	16:46
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	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
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	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
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	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
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	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

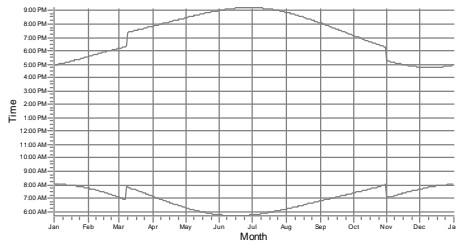
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

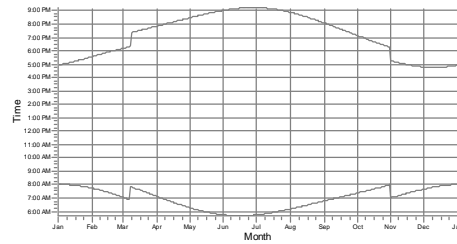
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

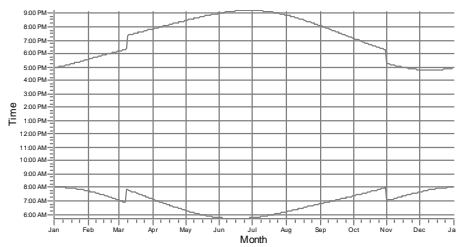
H048: H048



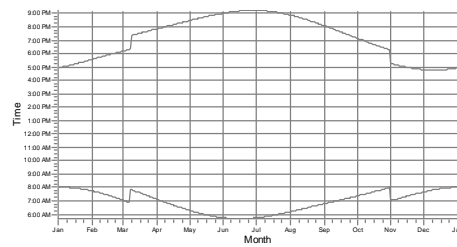
H049: H049



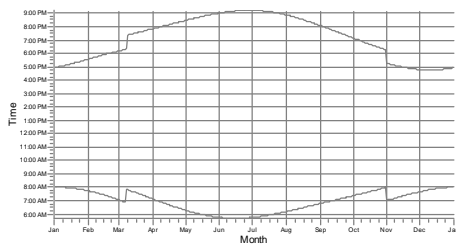
H050: H050



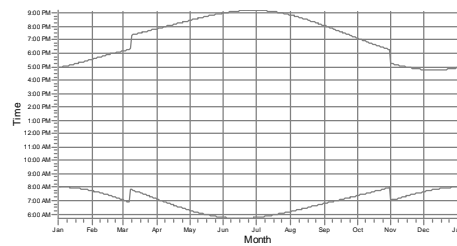
H051: H051



H052: H052



H053: H053



WTGs

Project:

20162030 Westwood Red Pine

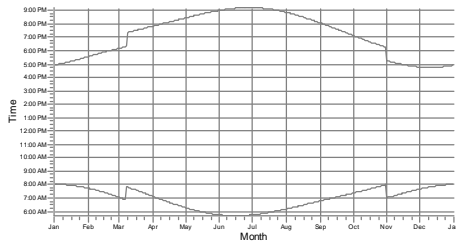
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

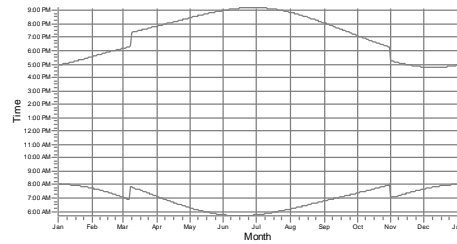
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

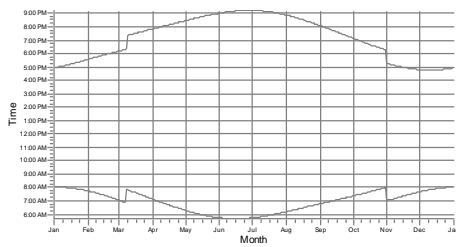
H080: H080



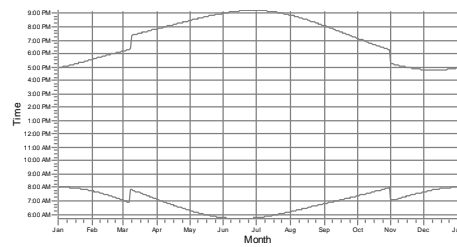
H081: H081



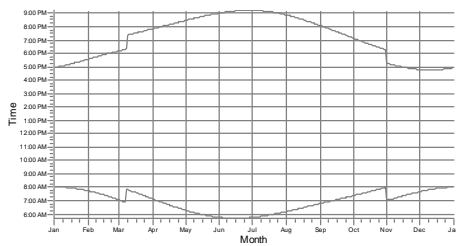
H082: H082



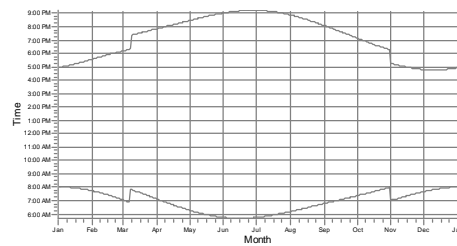
H083: H083



H084: H084



H085: H085



WTGs

Project:

20162030 Westwood Red Pine

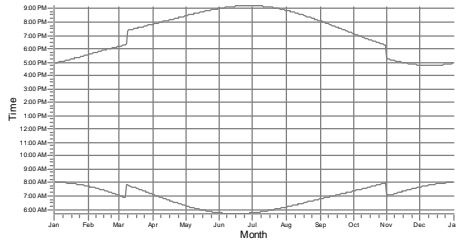
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

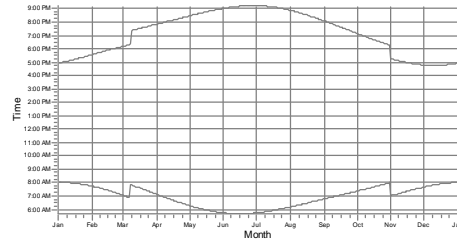
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

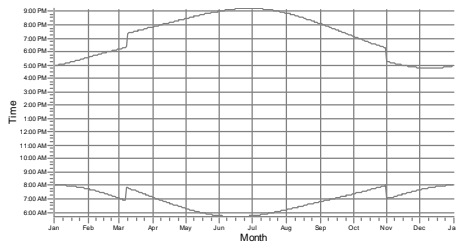
H086: H086



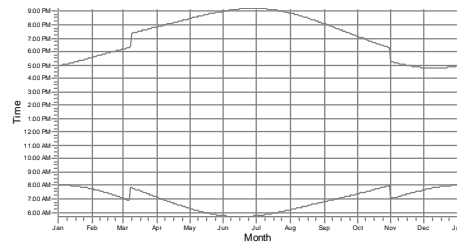
H087: H087



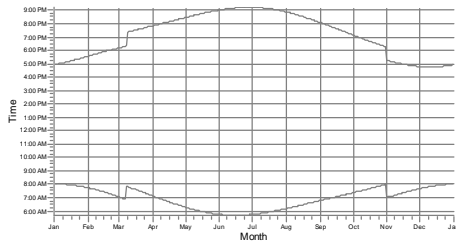
H088: H088



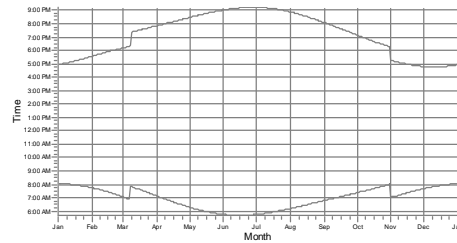
H090: H090



H091: H091



H092: H092



WTGs

Project:

20162030 Westwood Red Pine

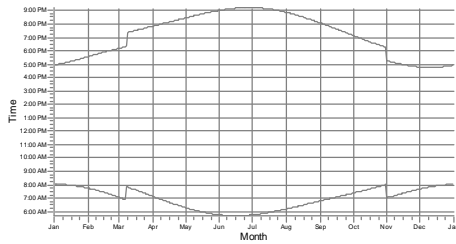
Licensed user:

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US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 2:04 PM/3.0.654

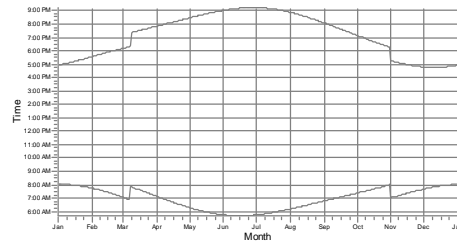
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

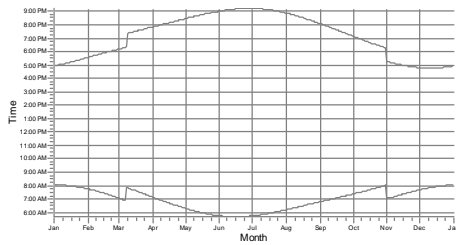
H093: H093



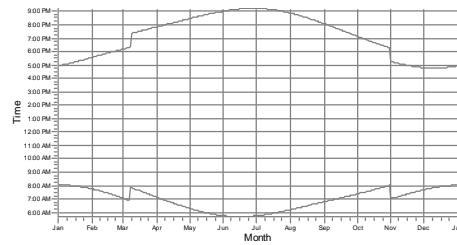
H094: H094



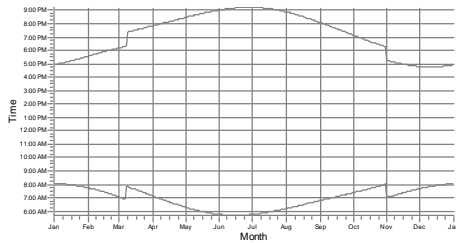
H095: H095



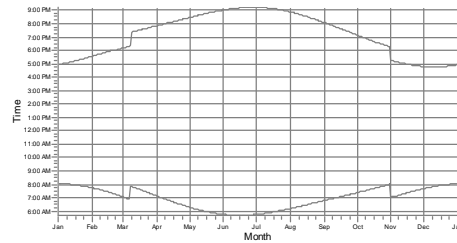
H096: H096



H097: H097



H112: H112



WTGs

Project:

20162030 Westwood Red Pine

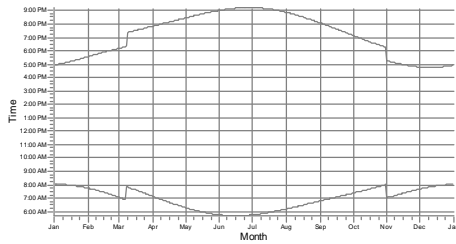
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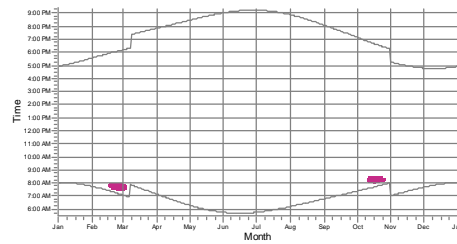
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

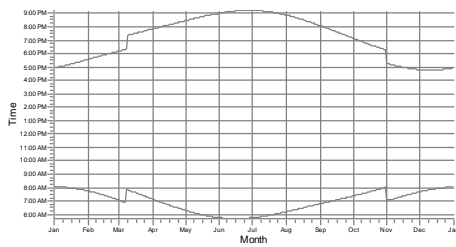
H113: H113



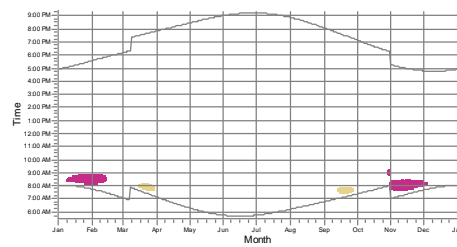
H114: H114



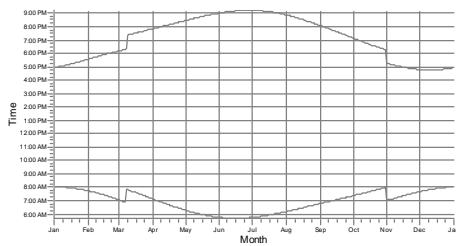
H115: H115



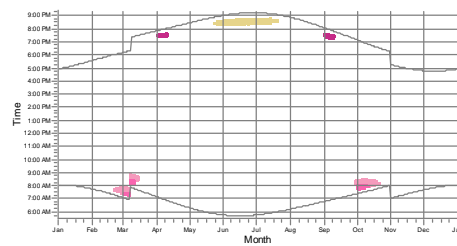
H116: H116



H117: H117



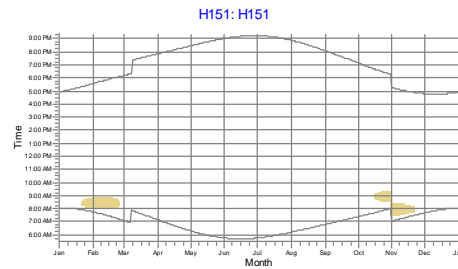
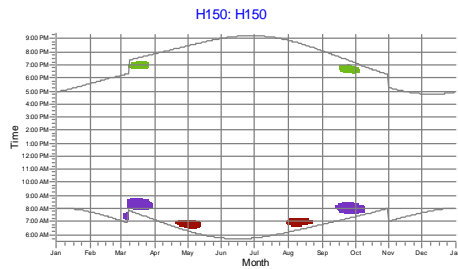
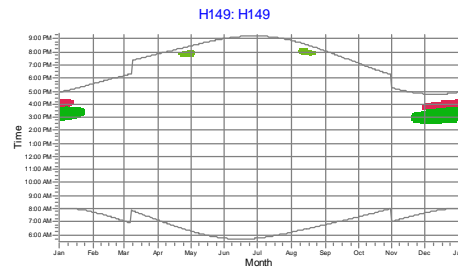
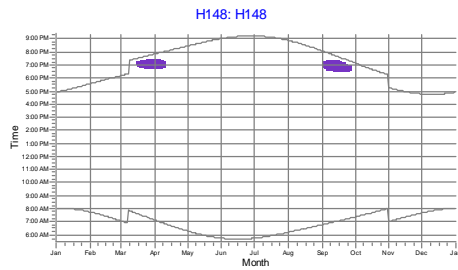
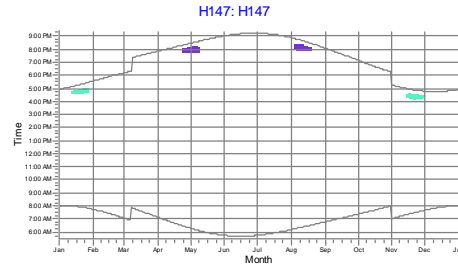
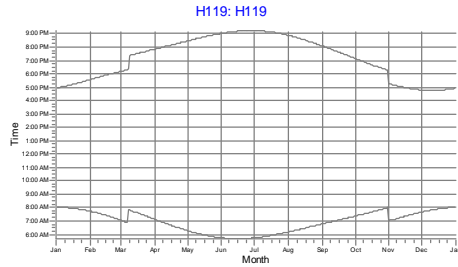
H118: H118



WTGs

57: Primary
 58: Primary
 59: Primary
 60: Primary

SHADOW - Calendar, graphical
 Calculation: V117-3.3 80m HH v24



WTGs

- 51: Primary
- 52: Primary
- 53: Primary
- 54: Primary
- 55: Primary
- 56: Primary
- 58: Primary

Project:

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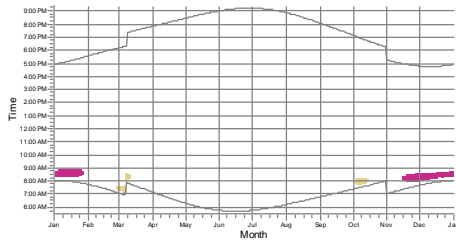
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Calculated:
6/24/2016 2:04 PM/3.0.654

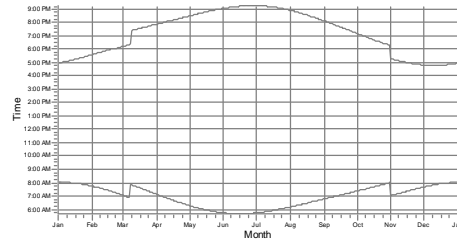
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

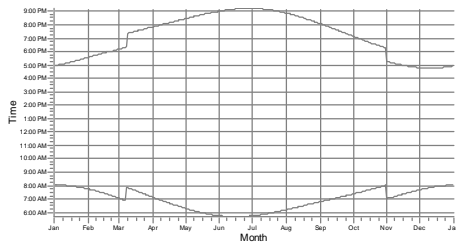
H152: H152



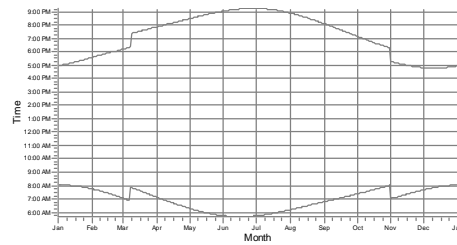
H153: H153



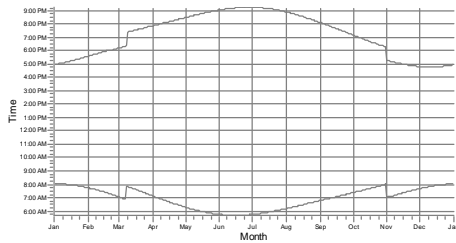
H154: H154



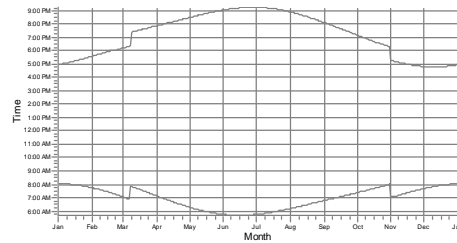
H155: H155



H156: H156



H157: H157



WTGs



57: Primary



58: Primary

Project:

20162030 Westwood Red Pine

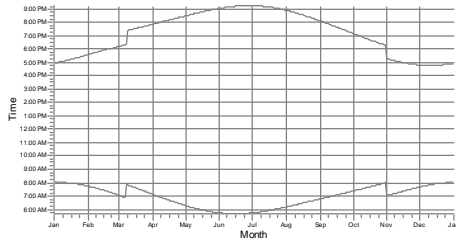
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Calculated:
6/24/2016 2:04 PM/3.0.654

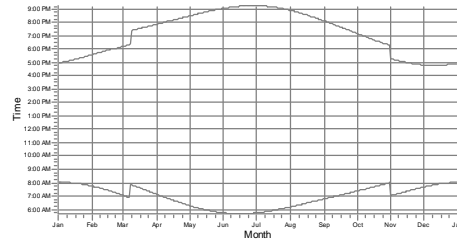
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

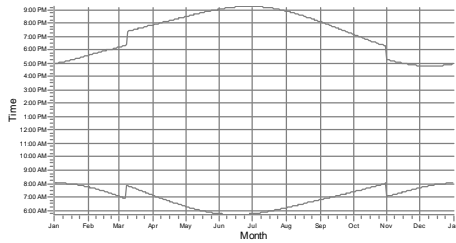
H161: H161



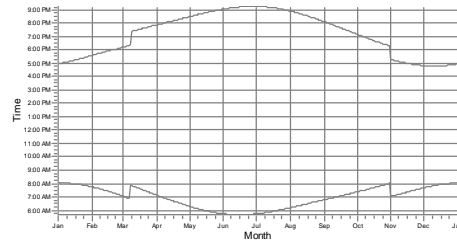
H163: H163



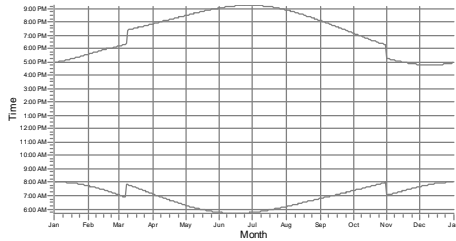
H165: H165



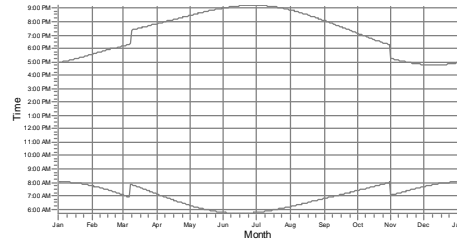
H166: H166



H167: H167



H168: H168



WTGs

Project:

20162030 Westwood Red Pine

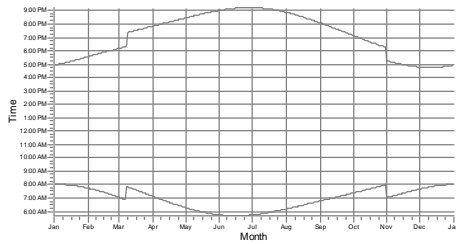
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Calculated:
6/24/2016 2:04 PM/3.0.654

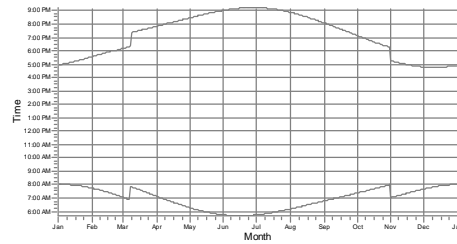
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

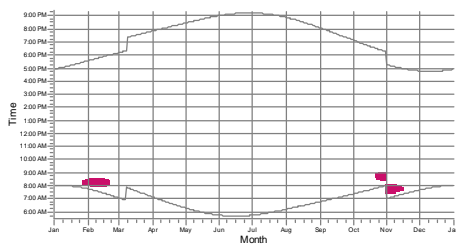
H169: H169



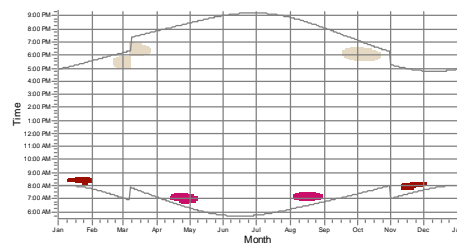
H170: H170



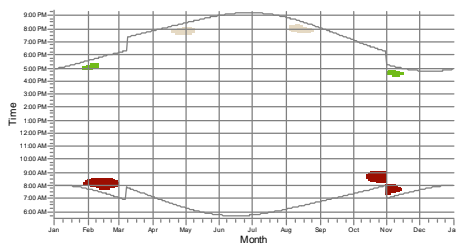
H171: H171



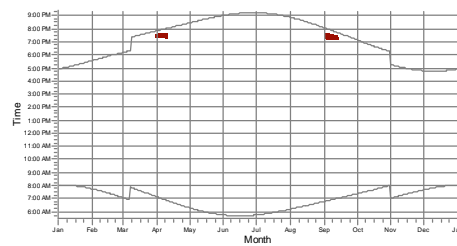
H172: H172



H173: H173



H174: H174



WTGs

- 49: Primary
- 50: Primary
- 51: Primary
- 52: Primary

Project:

20162030 Westwood Red Pine

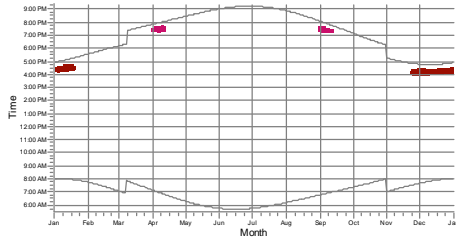
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Calculated:
6/24/2016 2:04 PM/3.0.654

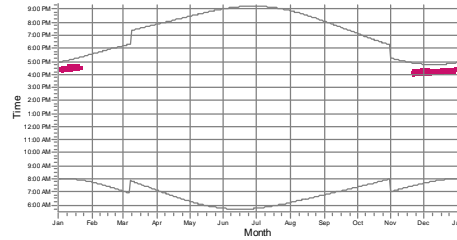
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

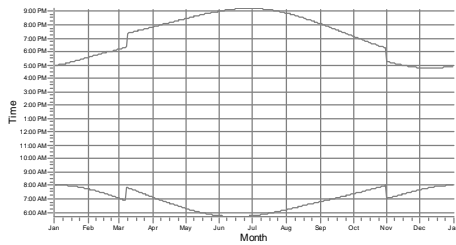
H175: H175



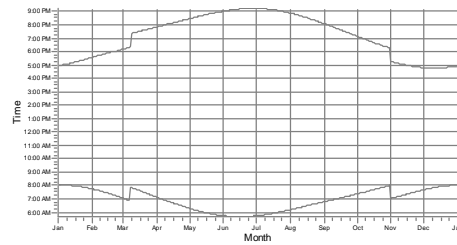
H198: H198



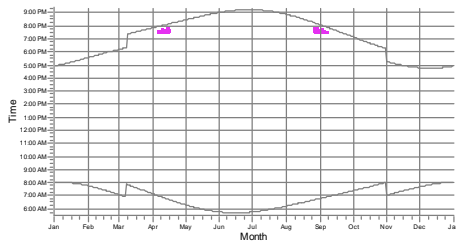
H199: H199



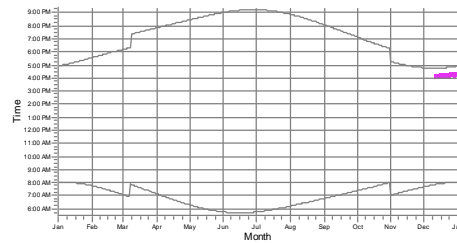
H200: H200



H201: H201



H202: H202

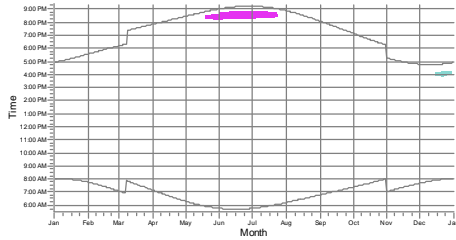


WTGs

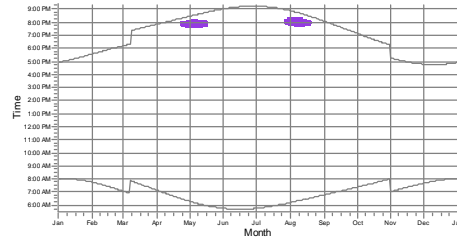
47: Primary
 50: Primary
 51: Primary

SHADOW - Calendar, graphical
 Calculation: V117-3.3 80m HH v24

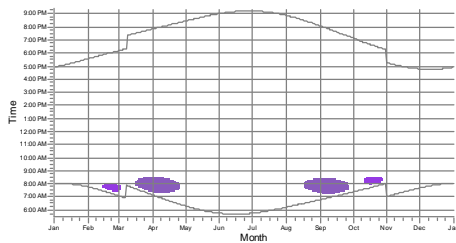
H203: H203



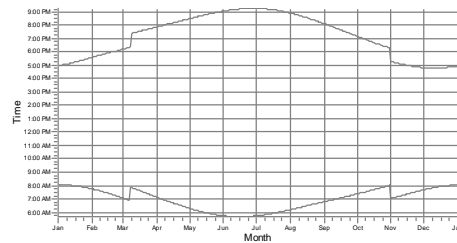
H204: H204



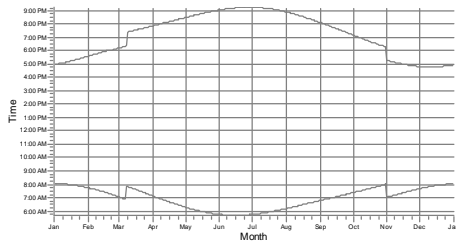
H206: H206



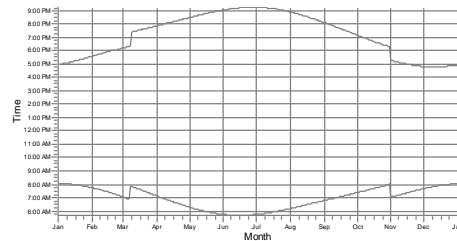
H207: H207



H208: H208



H209: H209



WTGs

- 45: Primary
- 46: Primary
- 47: Primary
- 48: Primary

Project:

20162030 Westwood Red Pine

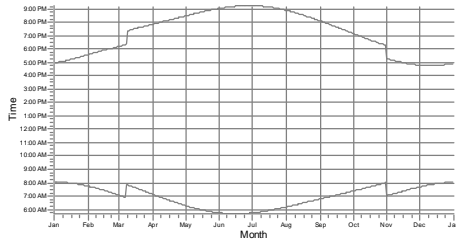
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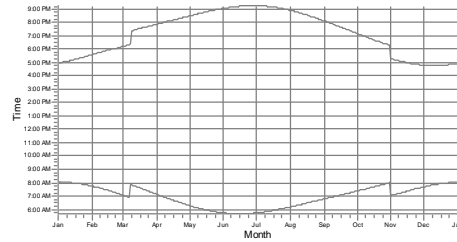
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

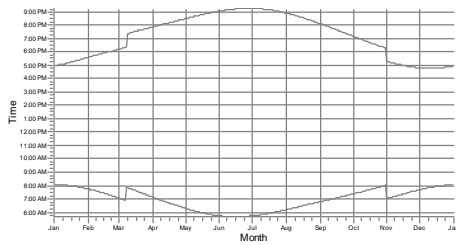
H210: H210



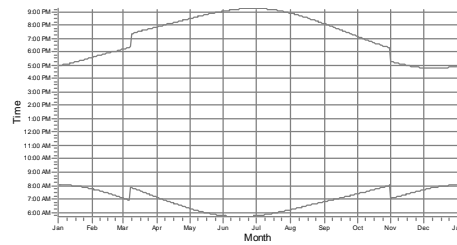
H211: H211



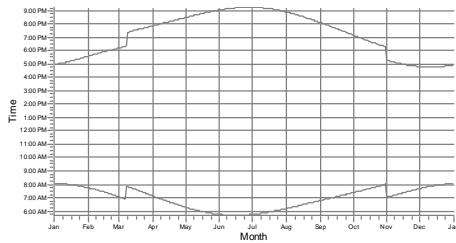
H212: H212



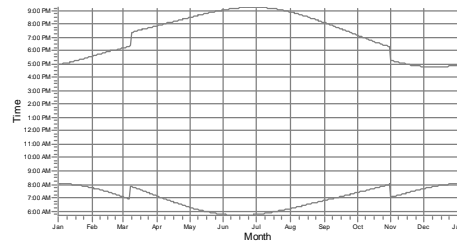
H213: H213



H214: H214



H215: H215



WTGs

Project:

20162030 Westwood Red Pine

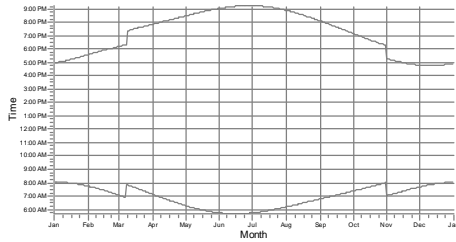
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Calculated:
6/24/2016 2:04 PM/3.0.654

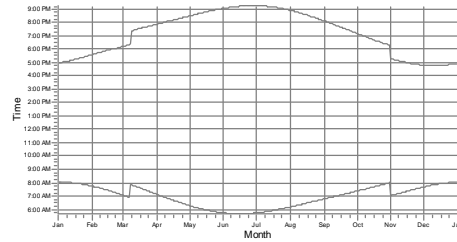
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

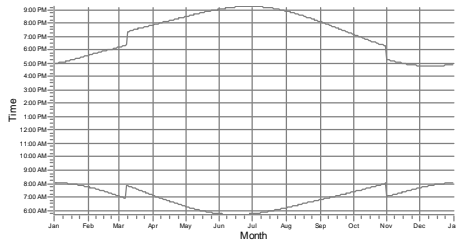
H217: H217



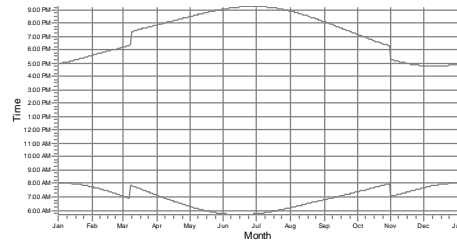
H220: H220



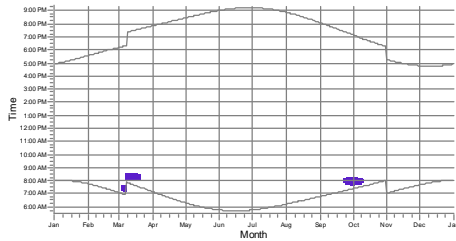
H221: H221



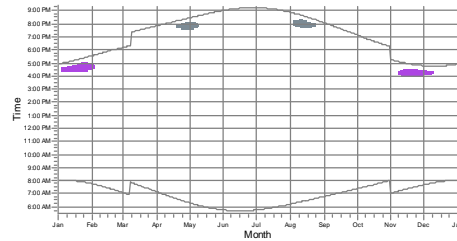
H222: H222



H224: H224



H225: H225



WTGs

38: Primary
 42: Primary
 43: Primary

Project:

20162030 Westwood Red Pine

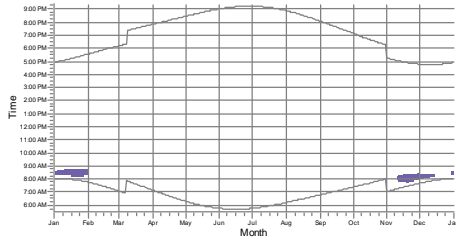
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6/24/2016 2:04 PM/3.0.654

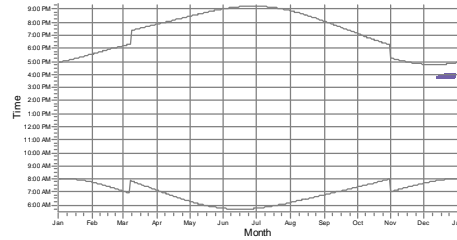
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

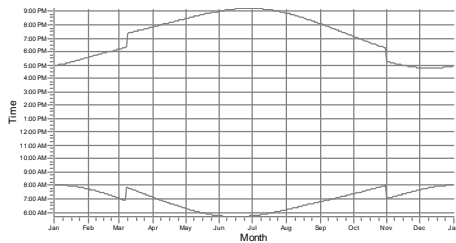
H226: H226



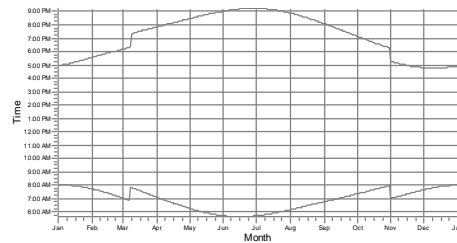
H227: H227



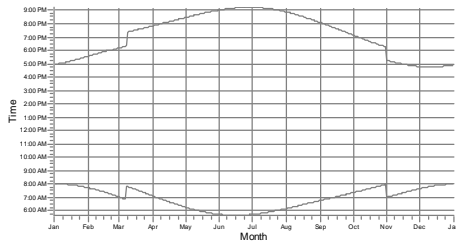
H228: H228



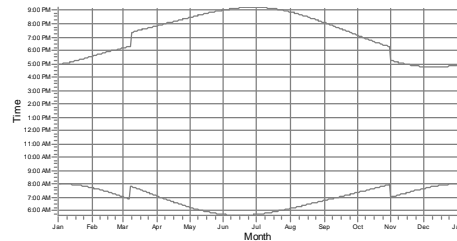
H230: H230



H233: H233



H248: H248

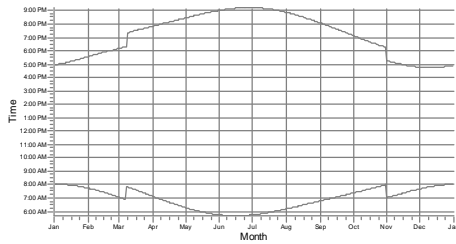


WTGs

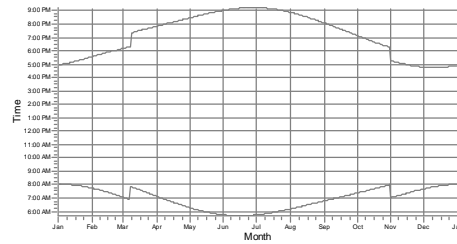
44: Primary

SHADOW - Calendar, graphical
 Calculation: V117-3.3 80m HH v24

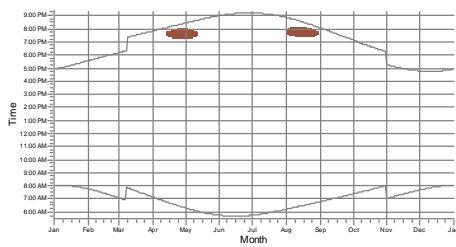
H249: H249



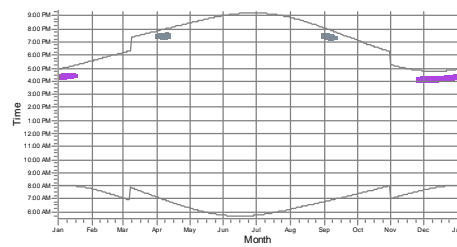
H250: H250



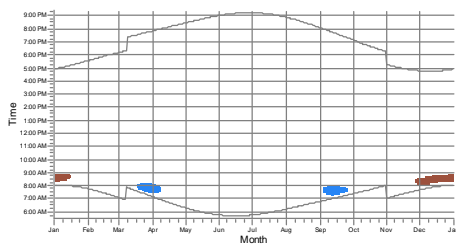
H251: H251



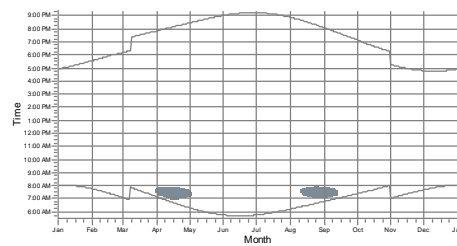
H252: H252



H253: H253



H254: H254

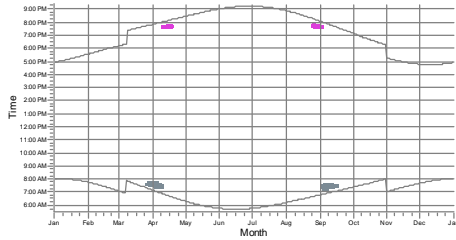


WTGs

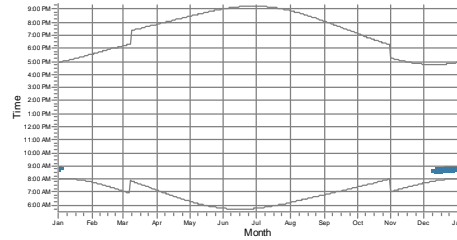
- 38: Primary
- 39: Primary
- 40: Primary
- 43: Primary

SHADOW - Calendar, graphical
 Calculation: V117-3.3 80m HH v24

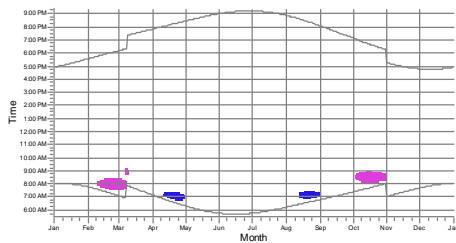
H255: H255



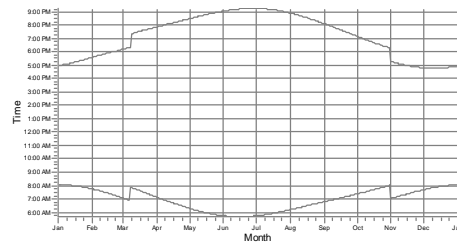
H257: H257



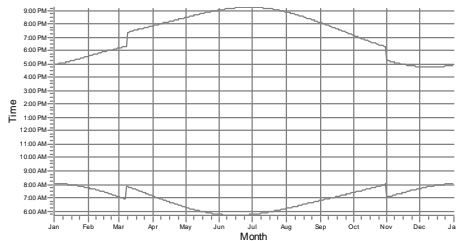
H258: H258



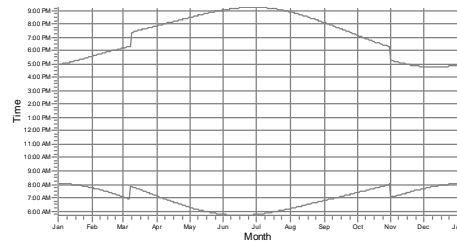
H259: H259



H260: H260



H261: H261



WTGs

- 35: Primary
- 36: Primary
- 37: Primary
- 38: Primary

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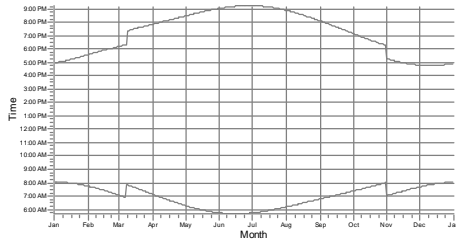
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Calculated:
6/24/2016 2:04 PM/3.0.654

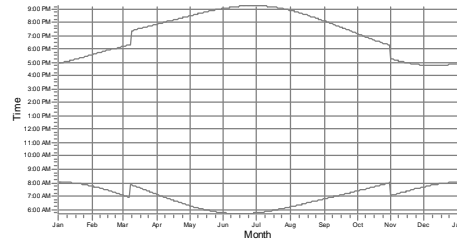
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

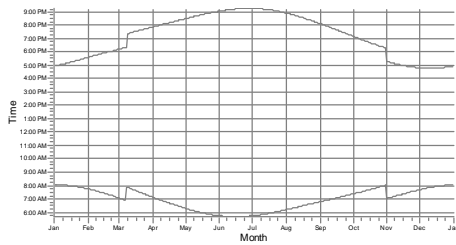
H262: H262



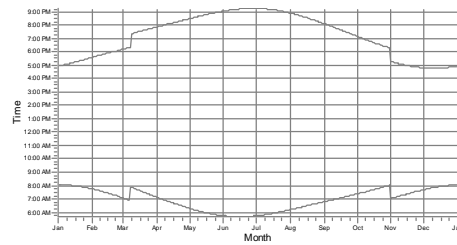
H278: H278



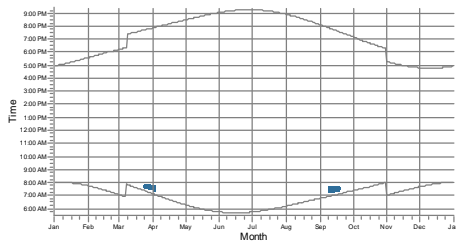
H279: H279



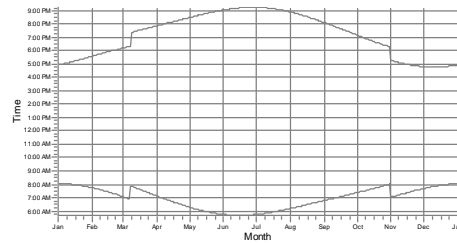
H280: H280



H281: H281



H282: H282



WTGs

22: Primary

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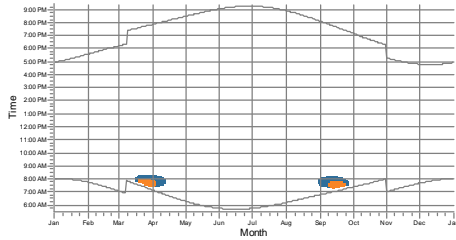
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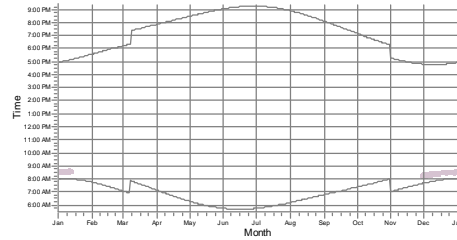
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

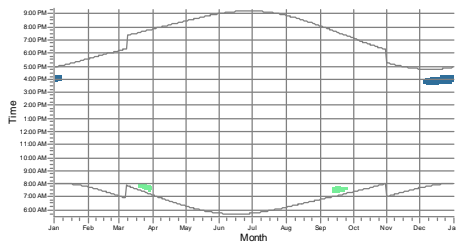
H283: H283



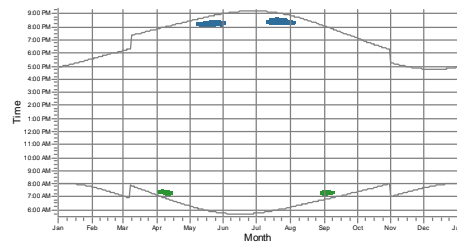
H284: H284



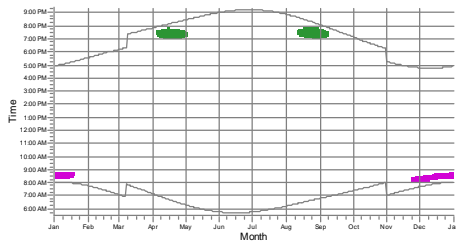
H285: H285



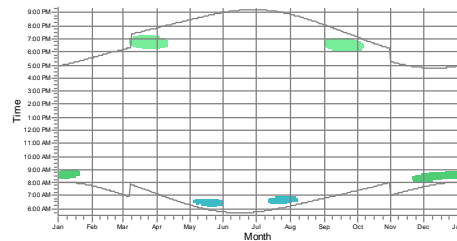
H286: H286



H287: H287



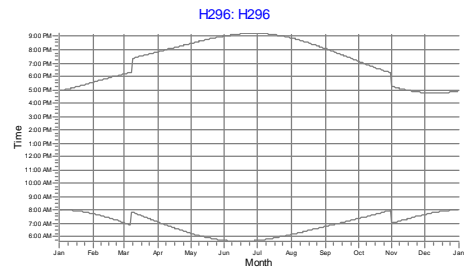
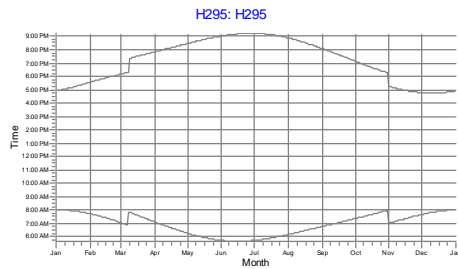
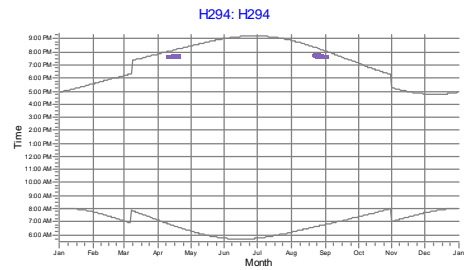
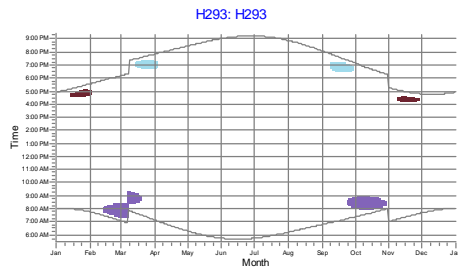
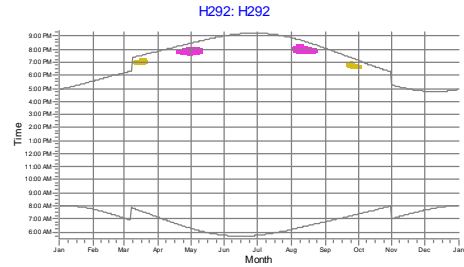
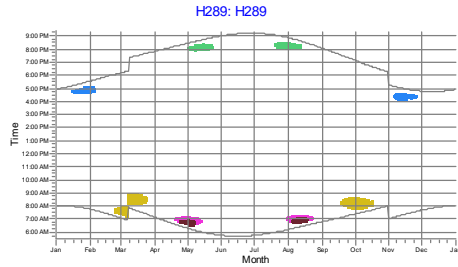
H288: H288



WTGs

 19: Primary	 23: Primary	 26: Primary	 28: Primary
 22: Primary	 25: Primary	 27: Primary	 41: Primary

SHADOW - Calendar, graphical
 Calculation: V117-3.3 80m HH v24



WTGs

- 28: Primary
- 30: Primary
- 31: Primary
- 32: Primary
- 33: Primary
- 34: Primary
- 39: Primary

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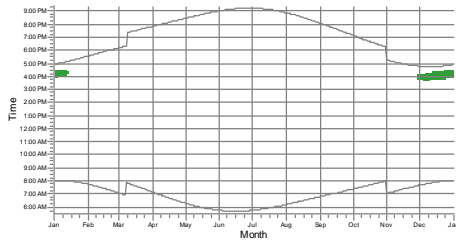
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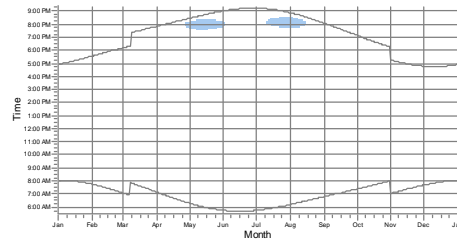
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

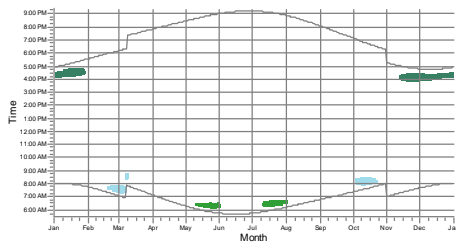
H297: H297



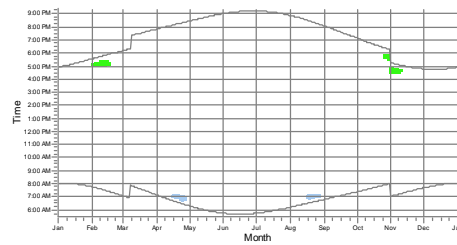
H299: H299



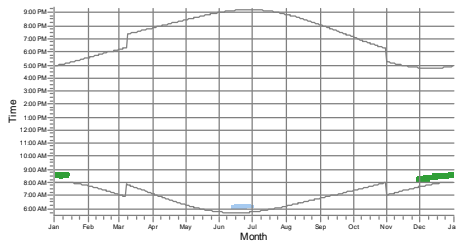
H300: H300



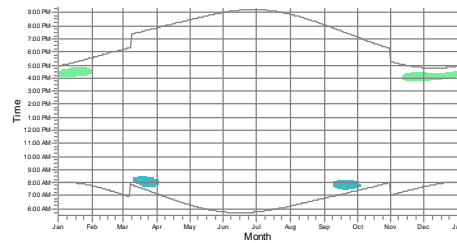
H301: H301



H302: H302



H303: H303



WTGs



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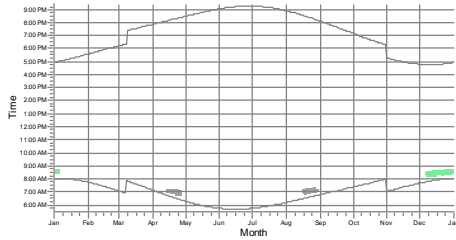
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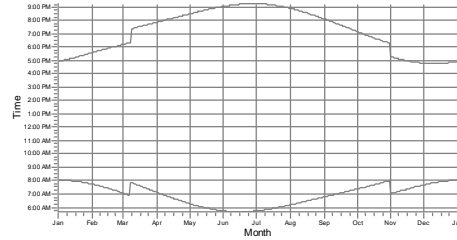
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

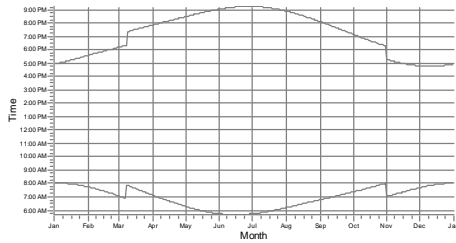
H305: H305



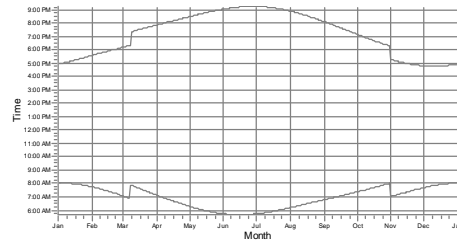
H307: H307



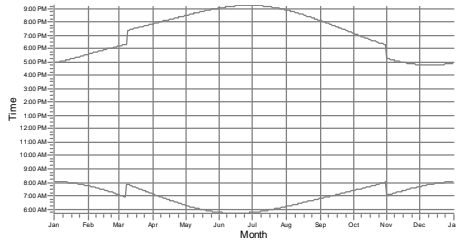
H308: H308



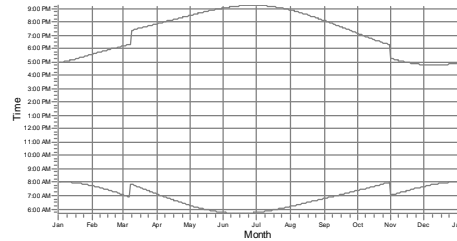
H309: H309



H310: H310



H311: H311



WTGs

16: Primary
 26: Primary

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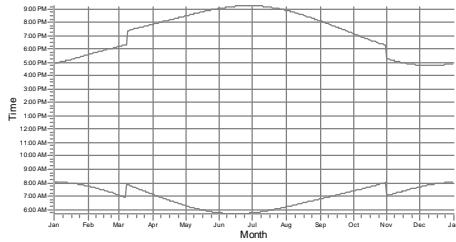
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6/24/2016 2:04 PM/3.0.654

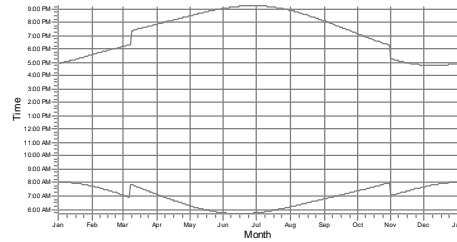
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

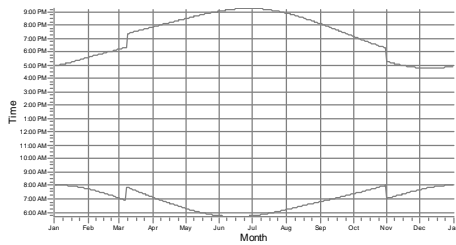
H312: H312



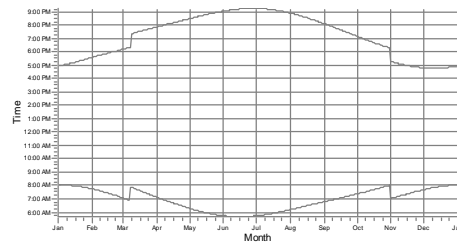
H313: H313



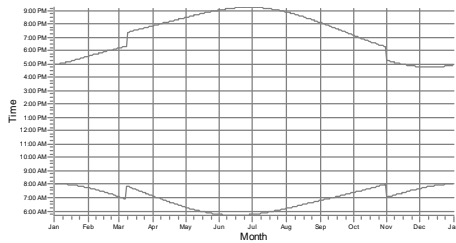
H314: H314



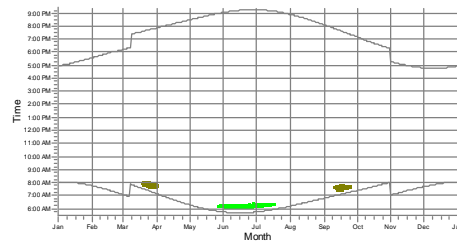
H315: H315



H316: H316



H317: H317



WTGs



9: Primary



10: Primary

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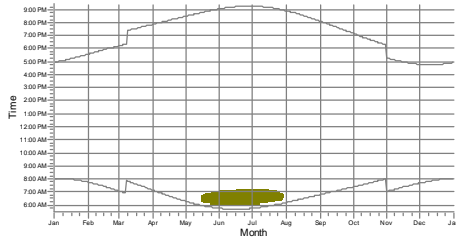
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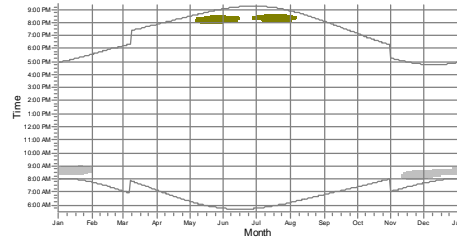
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

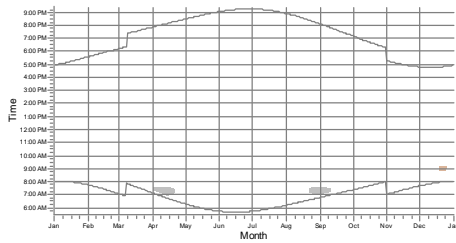
H318: H318



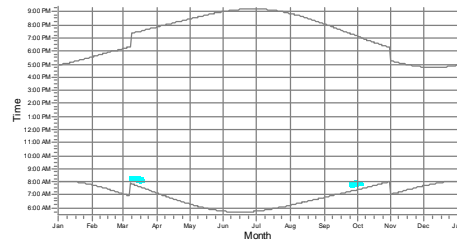
H319: H319



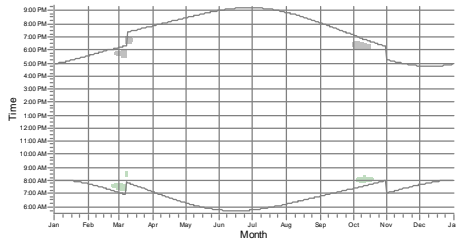
H320: H320



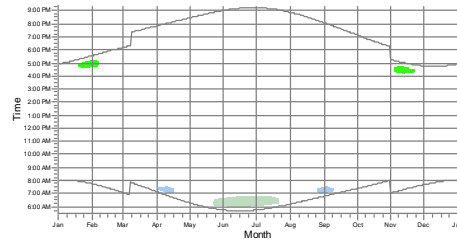
H321: H321



H322: H322



H323: H323



WTGs

- 10: Primary
- 12: Primary
- 13: Primary
- 14: Primary
- 15: Primary
- 17: Primary
- 18: Primary

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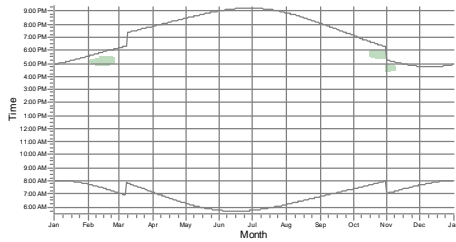
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Calculated:
6/24/2016 2:04 PM/3.0.654

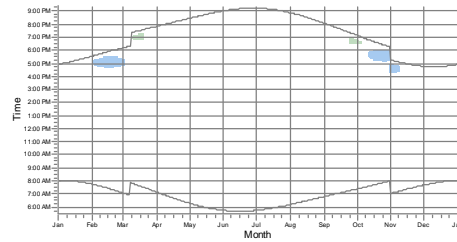
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

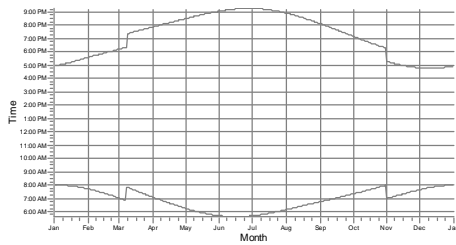
H324: H324



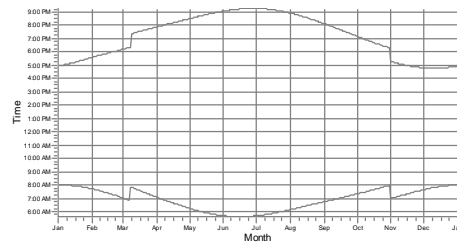
H325: H325



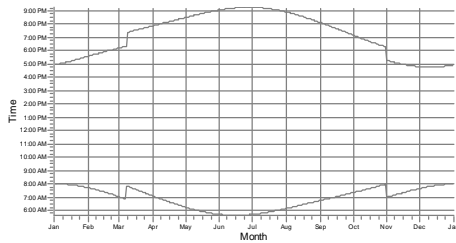
H326: H326



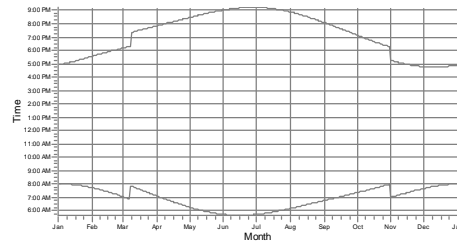
H327: H327



H328: H328



H330: H330



WTGs

14: Primary
 15: Primary

Project:

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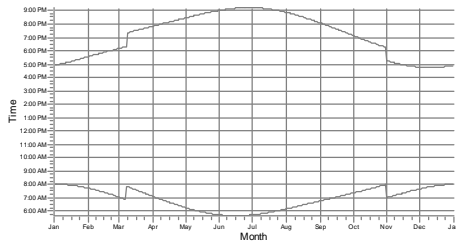
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Calculated:
6/24/2016 2:04 PM/3.0.654

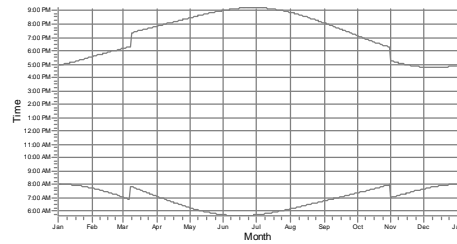
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

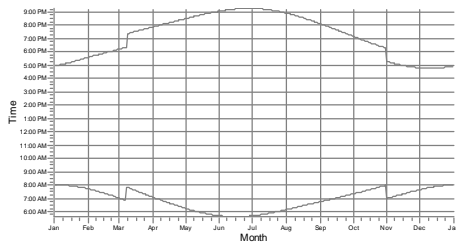
H331: H331



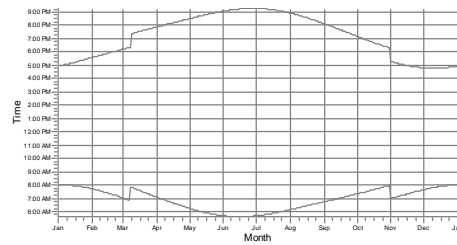
H334: H334



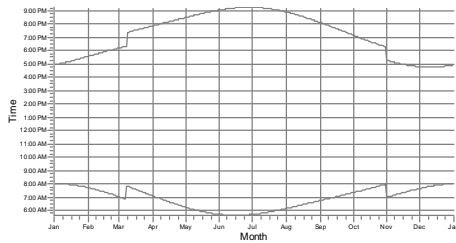
H335: H335



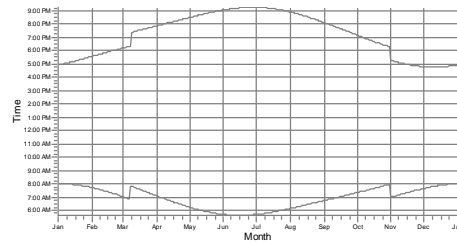
H336: H336



H337: H337



H338: H338



WTGs

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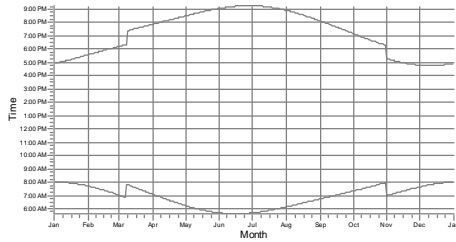
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Calculated:
6/24/2016 2:04 PM/3.0.654

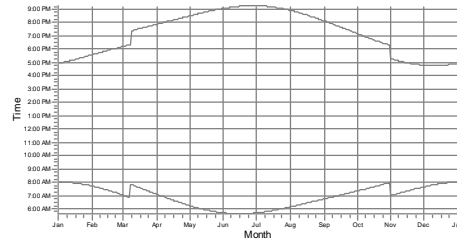
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

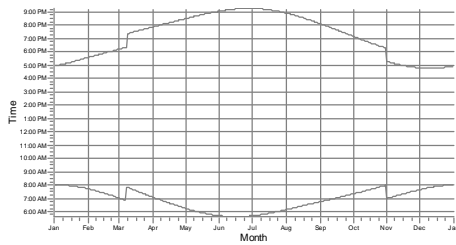
H339: H339



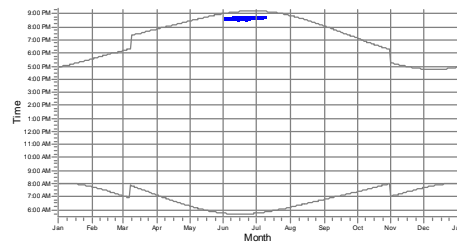
H340: H340



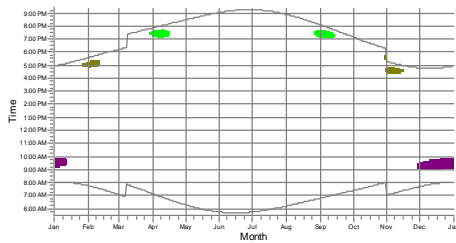
H341: H341



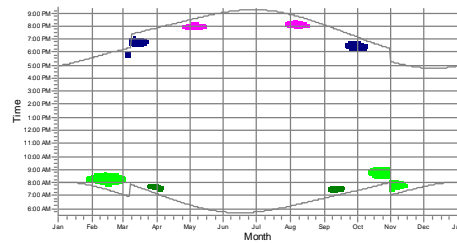
H342: H342



H343: H343



H345: H345

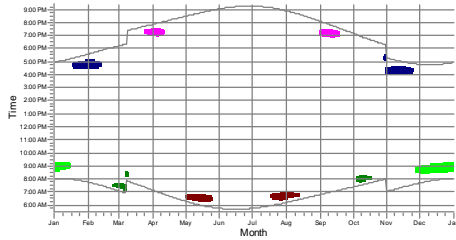


WTGs

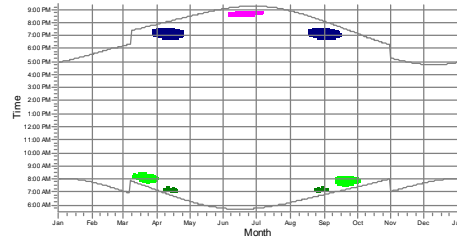
- 1: Primary
- 3: Primary
- 5: Primary
- 7: Primary
- 9: Primary
- 10: Primary
- 11: Primary

SHADOW - Calendar, graphical
 Calculation: V117-3.3 80m HH v24

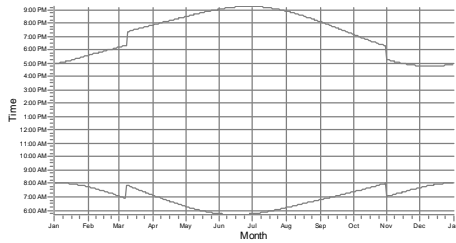
H346: H346



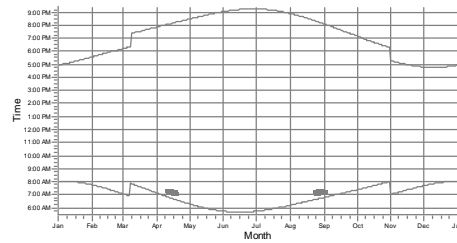
H347: H347



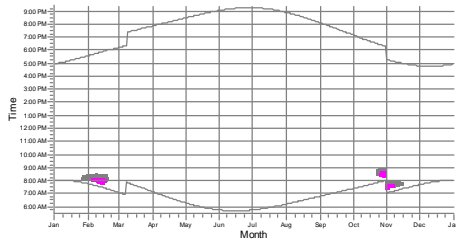
H348: H348



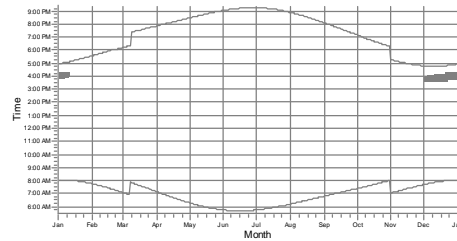
H349: H349



H350: H350



H351: H351



WTGs

- 1: Primary
- 4: Primary
- 5: Primary
- 7: Primary
- 8: Primary
- 9: Primary

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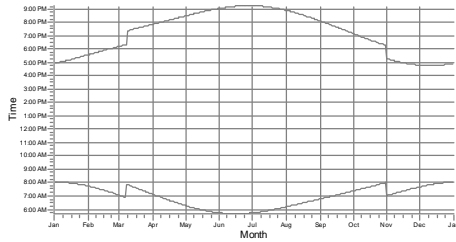
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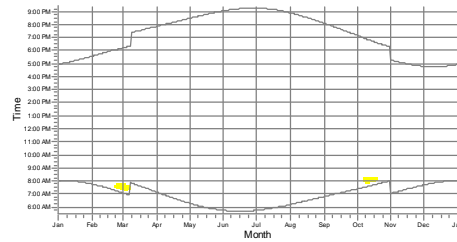
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

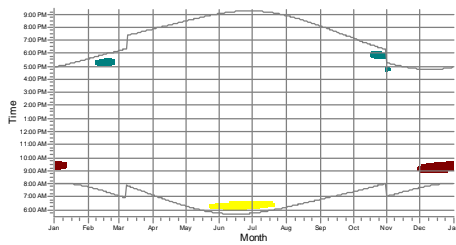
H352: H352



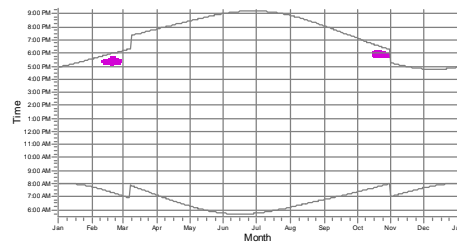
H353: H353



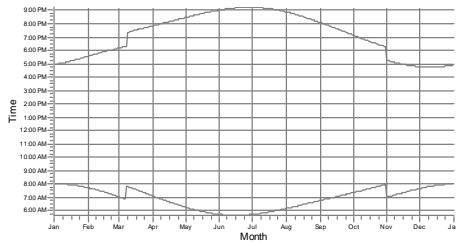
H354: H354



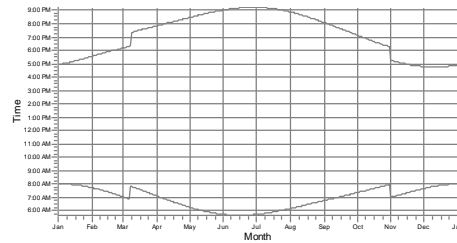
H355: H355



H356: H356



H357: H357



WTGs

- 2: Primary
- 6: Primary
- 8: Primary
- 41: Primary

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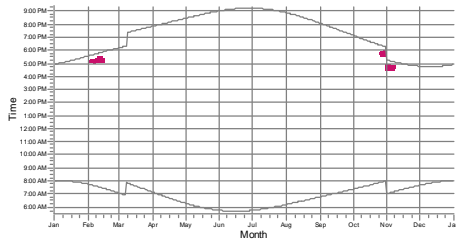
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6/24/2016 2:04 PM/3.0.654

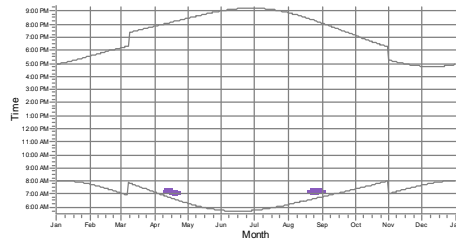
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

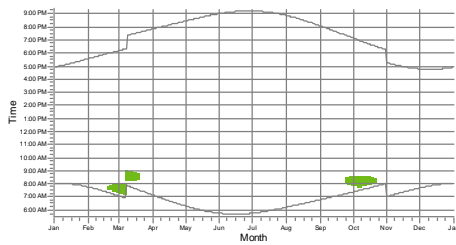
H358: H358



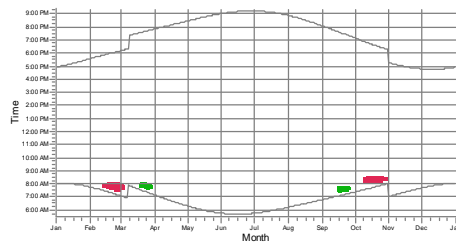
H359: H359



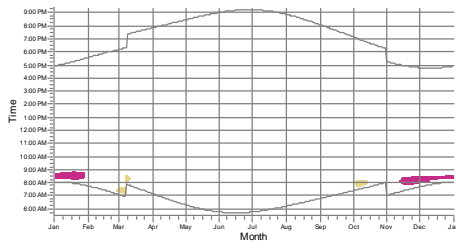
H360: H360



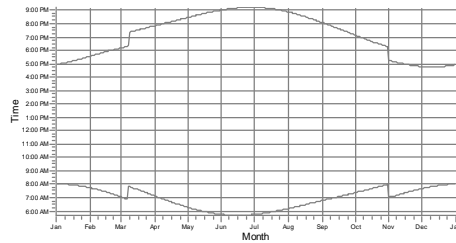
H361: H361



H362: H362



H363: H363



WTGs

- 45: Primary
- 50: Primary
- 52: Primary
- 53: Primary
- 54: Primary
- 57: Primary
- 58: Primary

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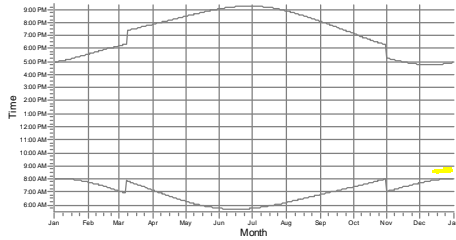
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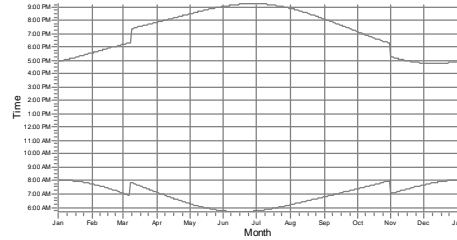
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

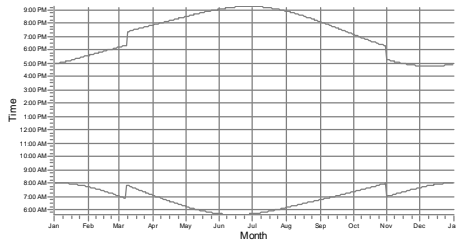
H364: H364



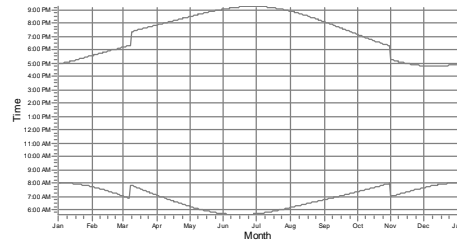
H365: H365



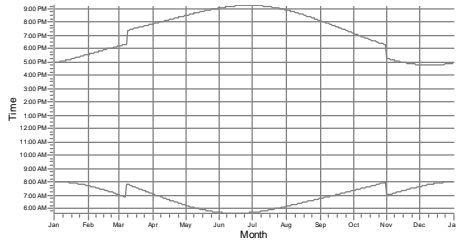
H366: H366



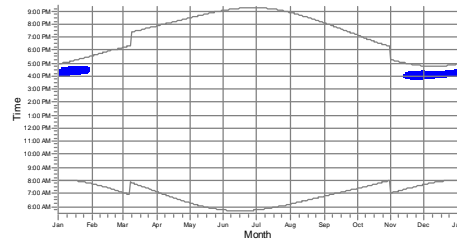
H367: H367



H368: H368



H369: H369



WTGs



2: Primary



3: Primary

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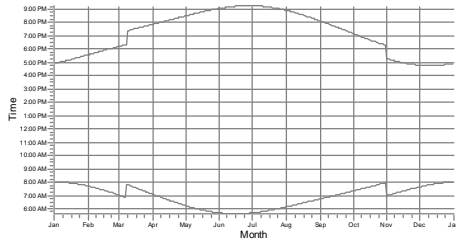
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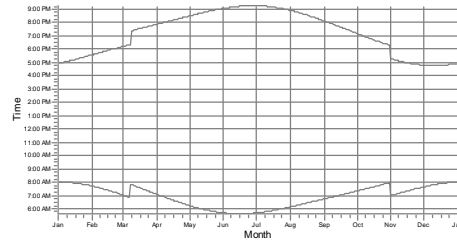
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

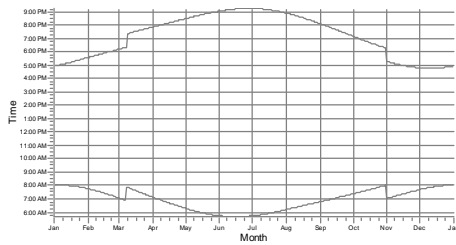
H370: H370



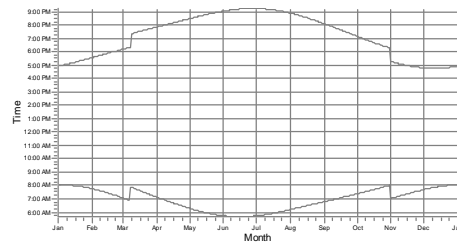
H371: H371



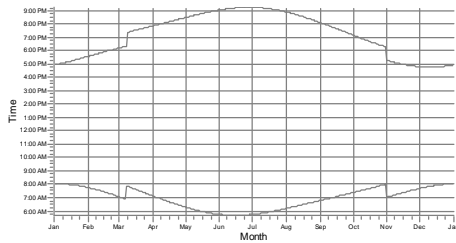
H372: H372



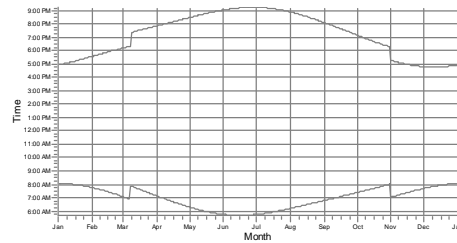
H373: H373



H374: H374



H375: H375



WTGs

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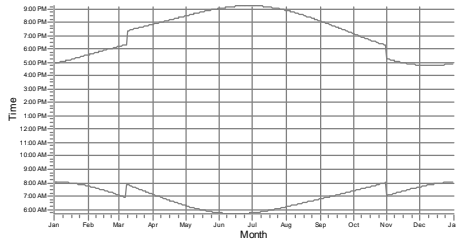
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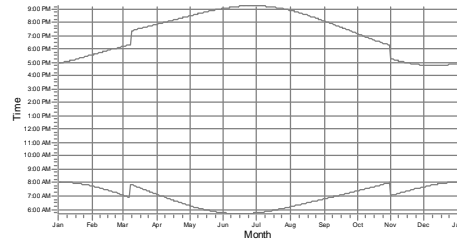
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

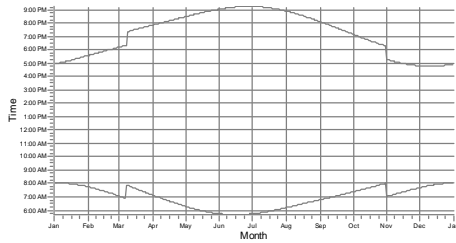
H376: H376



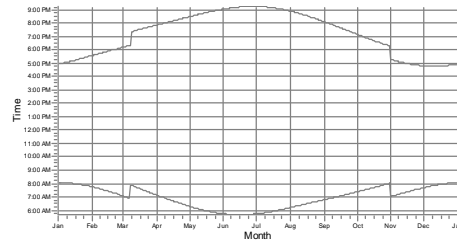
H377: H377



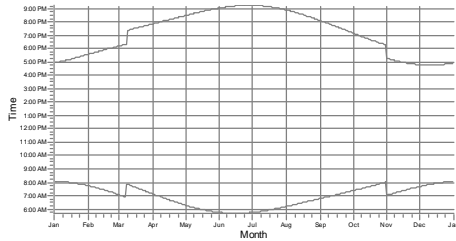
H378: H378



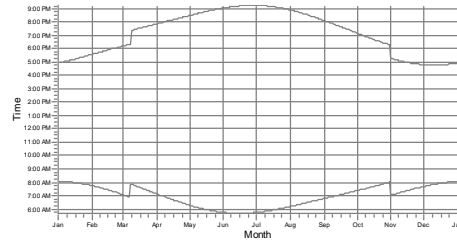
H379: H379



H380: H380



H381: H381



WTGs

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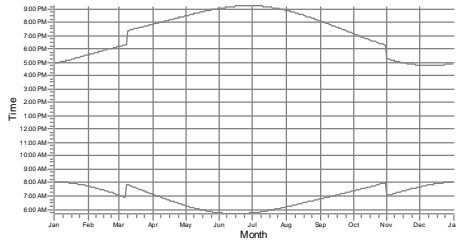
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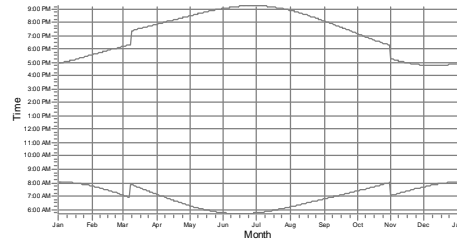
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

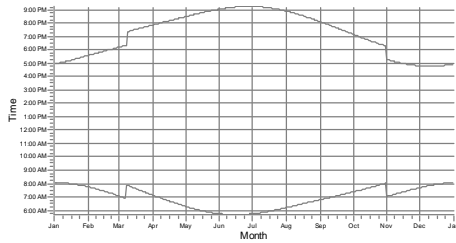
H382: H382



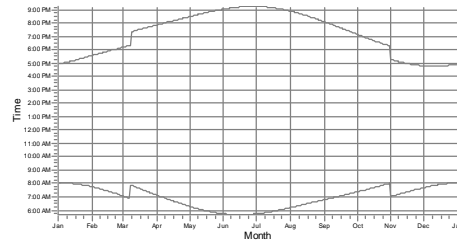
H383: H383



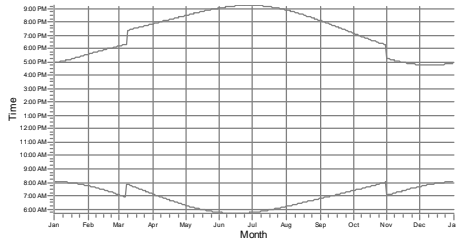
H384: H384



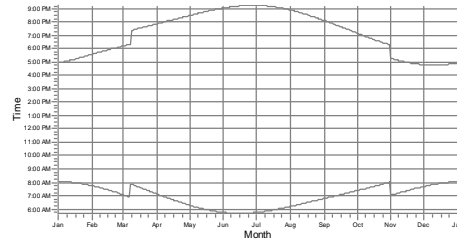
H385: H385



H386: H386



H387: H387



WTGs

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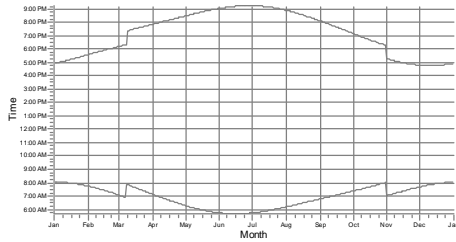
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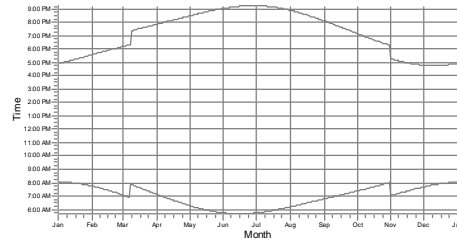
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

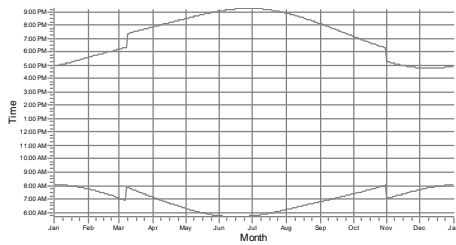
H388: H388



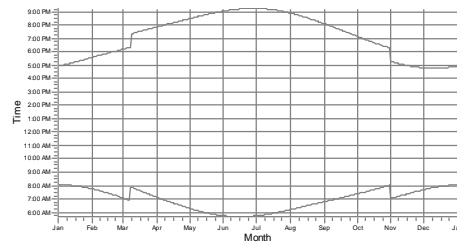
H389: H389



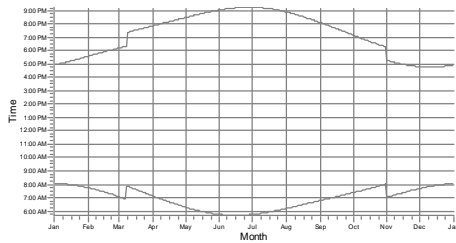
H390: H390



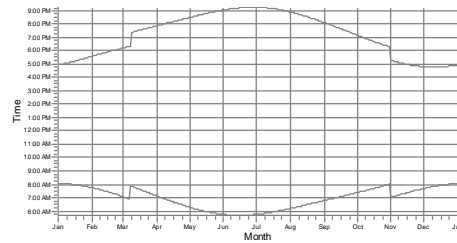
H391: H391



H392: H392



H393: H393



WTGs

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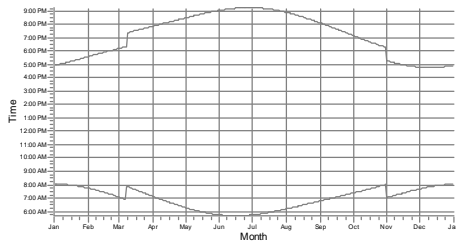
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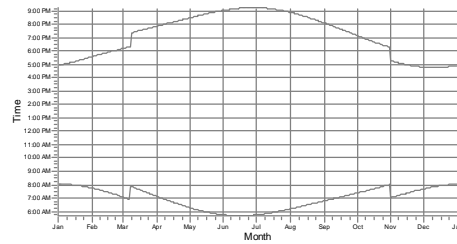
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

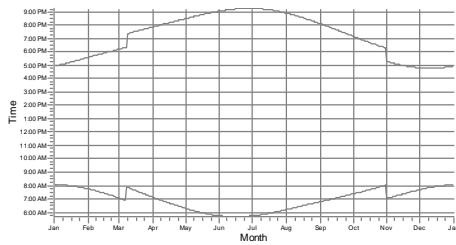
H394: H394



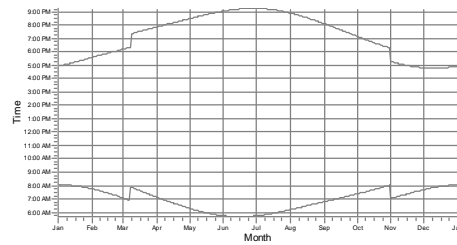
H395: H395



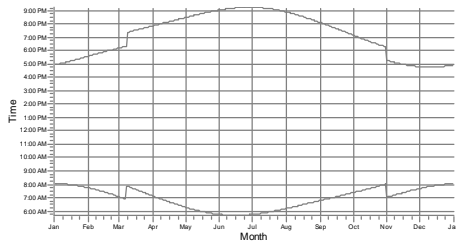
H396: H396



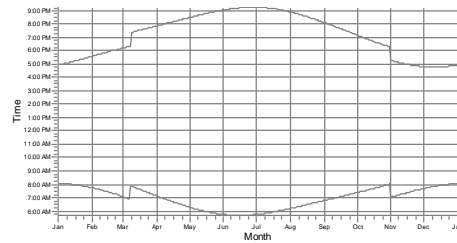
H397: H397



H398: H398



H399: H399



WTGs

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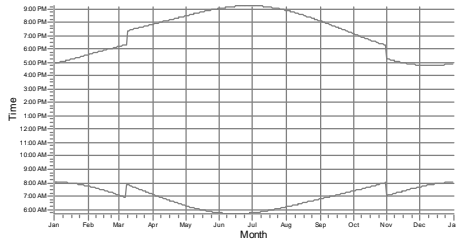
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Calculated:
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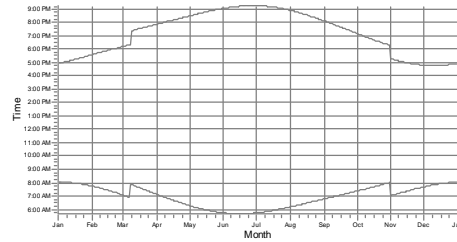
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

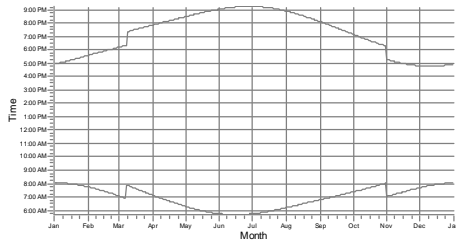
H400: H400



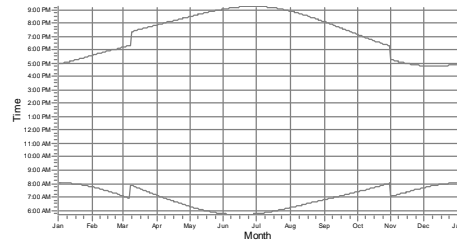
H401: H401



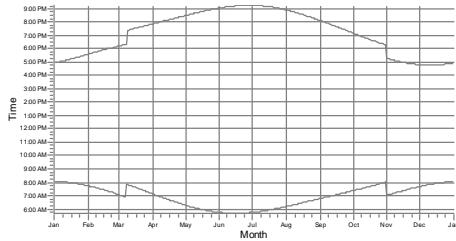
H402: H402



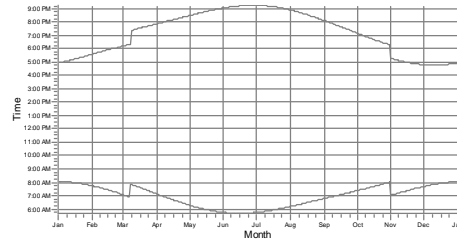
H403: H403



H404: H404



H405: H405



WTGs

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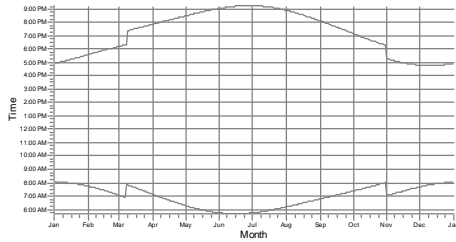
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Calculated:
6/24/2016 2:04 PM/3.0.654

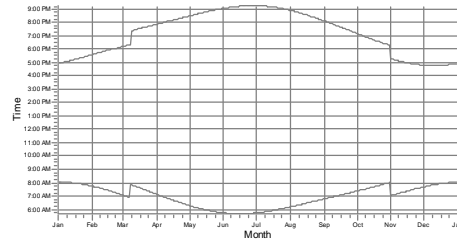
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

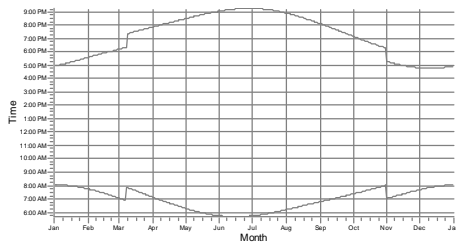
H406: H406



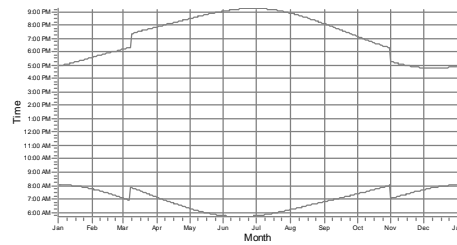
H407: H407



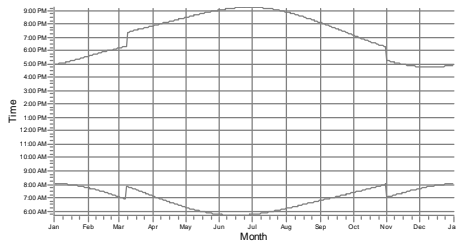
H408: H408



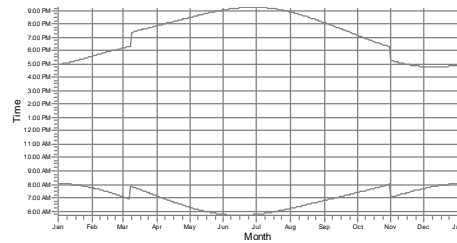
H409: H409



H410: H410



H411: H411



WTGs

Project:

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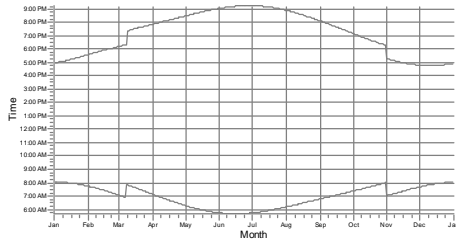
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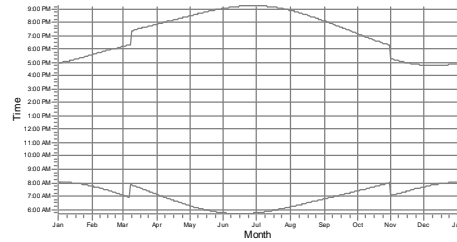
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

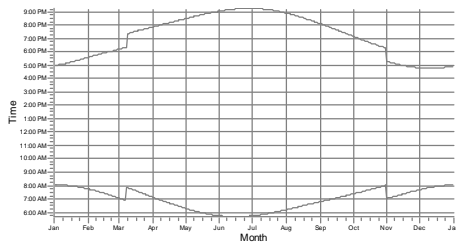
H412: H412



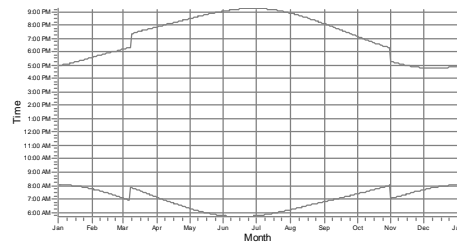
H413: H413



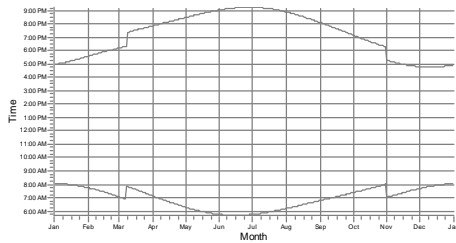
H414: H414



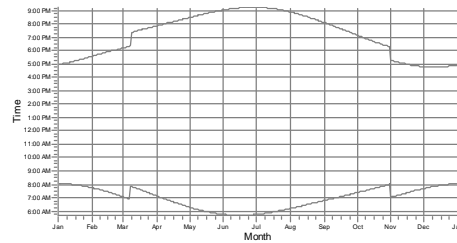
H415: H415



H416: H416



H417: H417



WTGs

Project:

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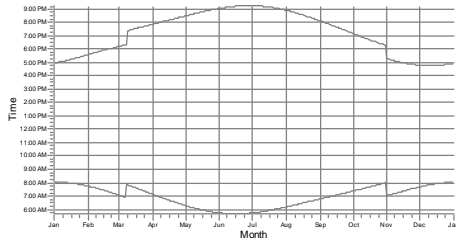
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Calculated:
6/24/2016 2:04 PM/3.0.654

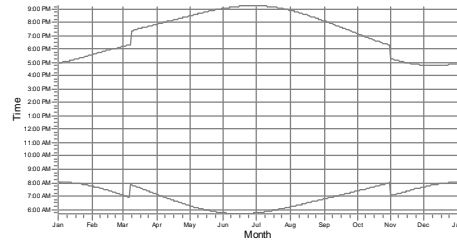
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

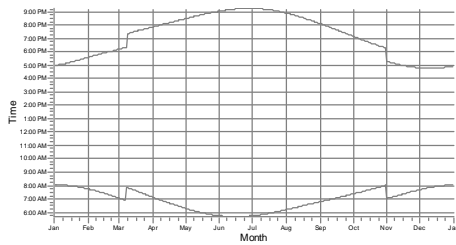
H418: H418



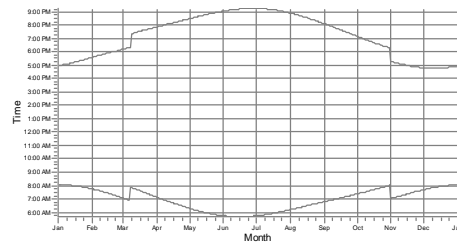
H419: H419



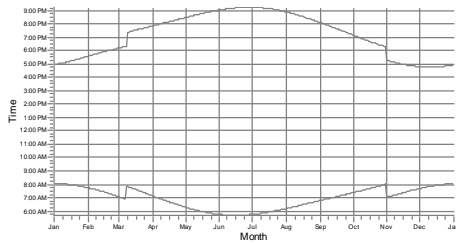
H420: H420



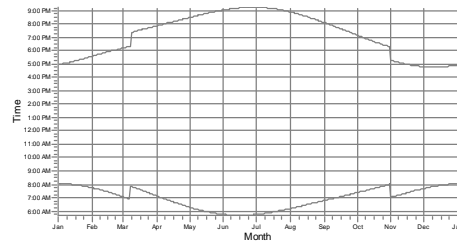
H421: H421



H422: H422



H423: H423



WTGs

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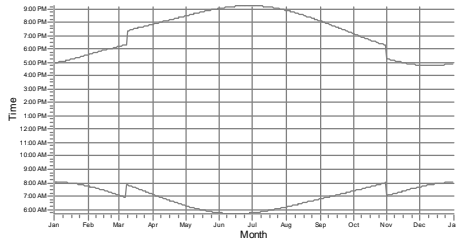
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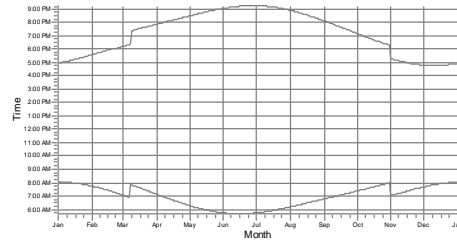
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

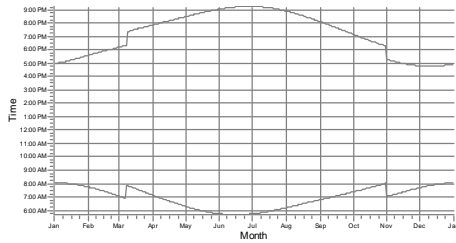
H424: H424



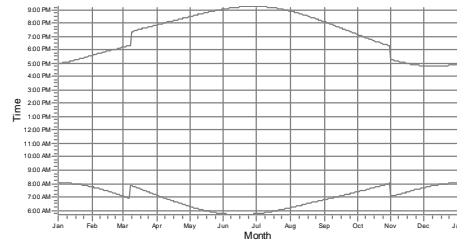
H425: H425



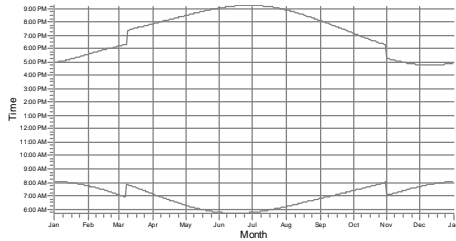
H426: H426



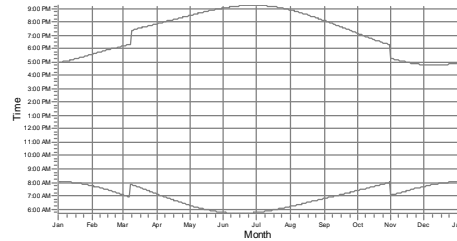
H427: H427



H428: H428



H429: H429



WTGs

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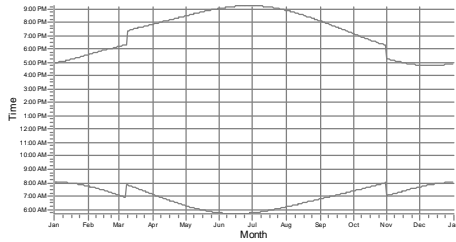
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Calculated:
6/24/2016 2:04 PM/3.0.654

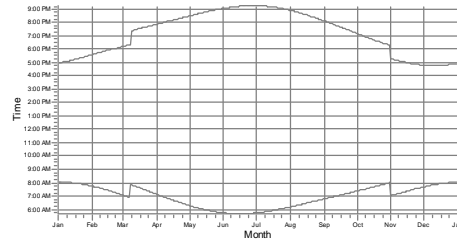
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

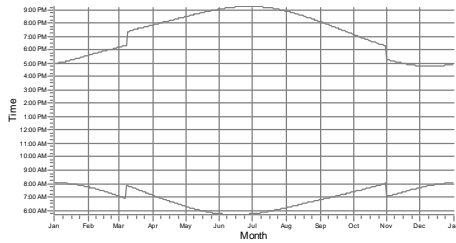
H430: H430



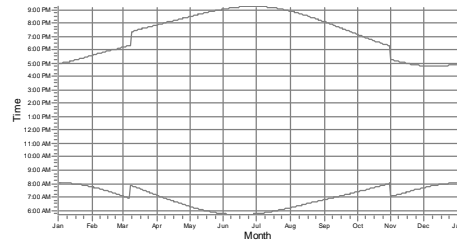
H431: H431



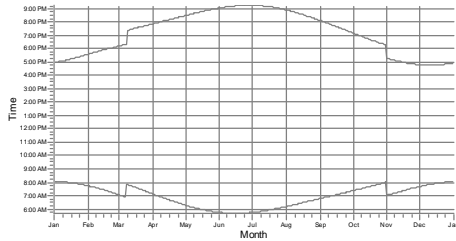
H432: H432



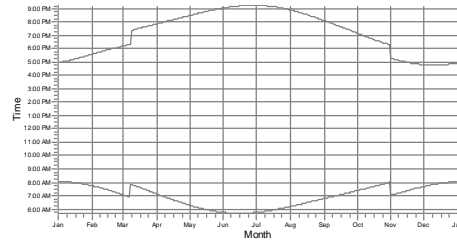
H433: H433



H434: H434



H435: H435



WTGs

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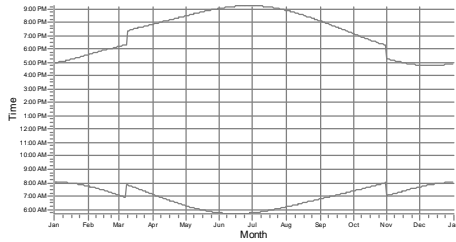
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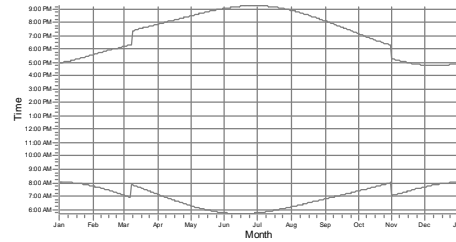
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

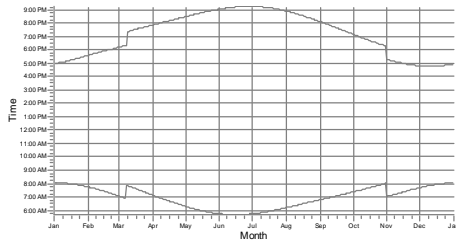
H436: H436



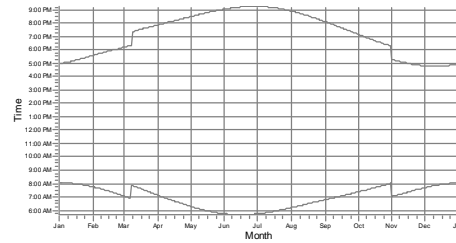
H437: H437



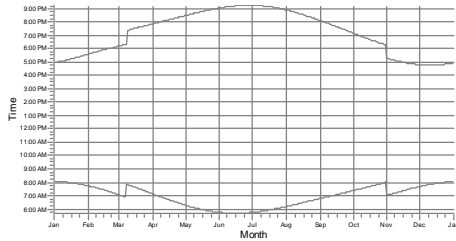
H438: H438



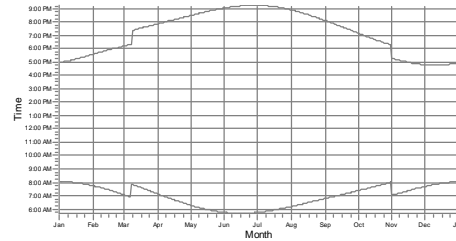
H439: H439



H440: H440



H441: H441



WTGs

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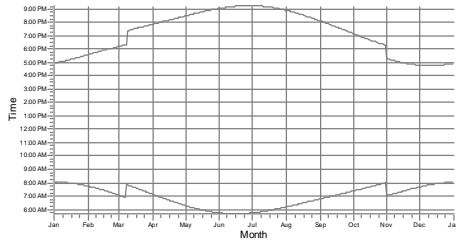
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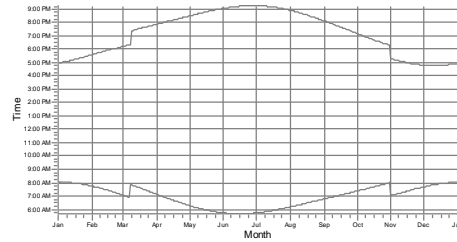
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

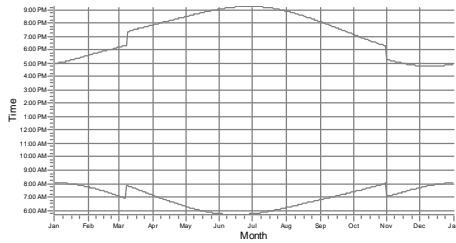
H442: H442



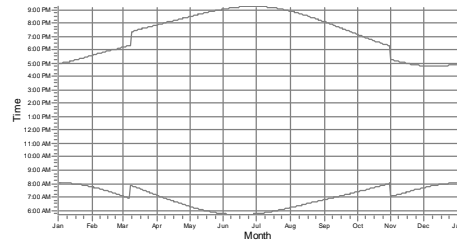
H443: H443



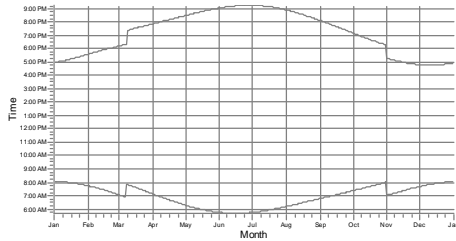
H444: H444



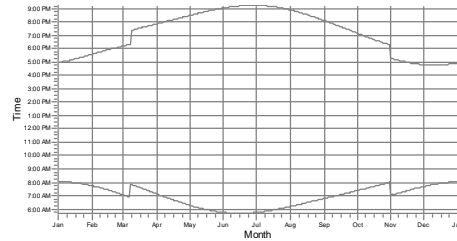
H445: H445



H446: H446



H447: H447



WTGs

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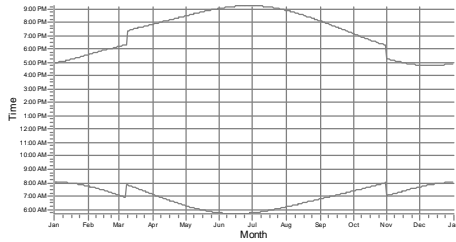
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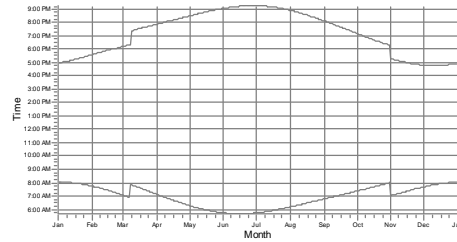
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

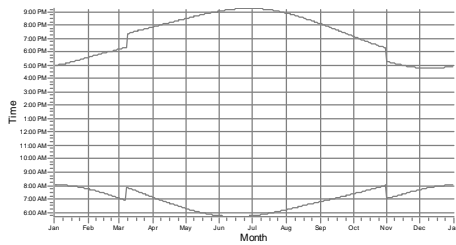
H448: H448



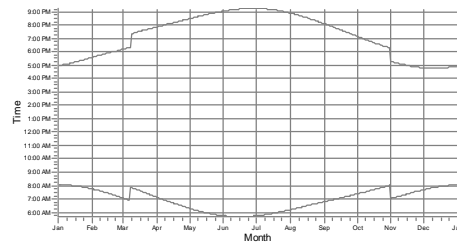
H449: H449



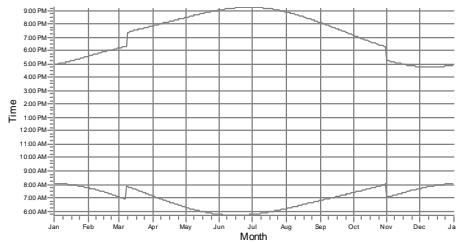
H450: H450



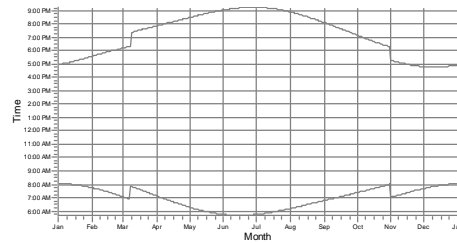
H451: H451



H452: H452



H453: H453



WTGs

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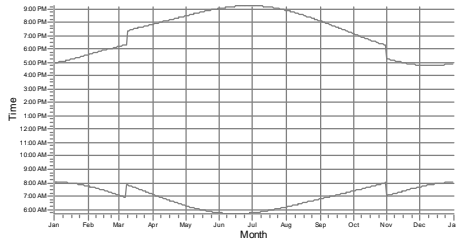
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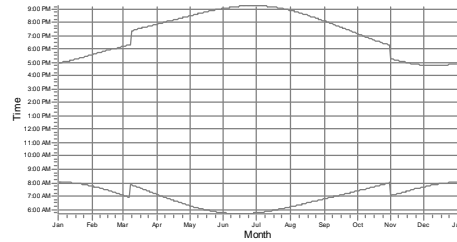
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

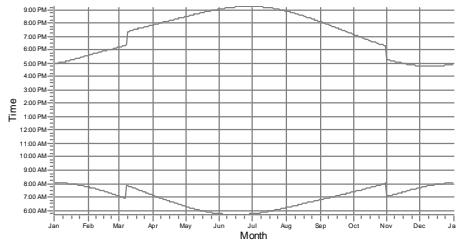
H454: H454



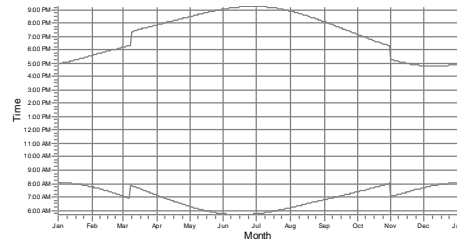
H455: H455



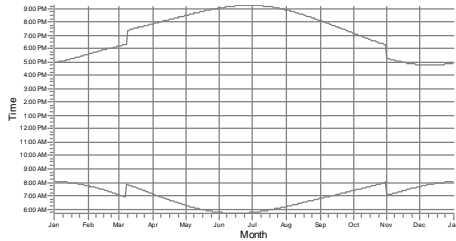
H456: H456



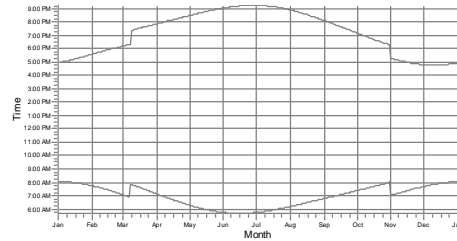
H457: H457



H458: H458



H459: H459



WTGs

Project:

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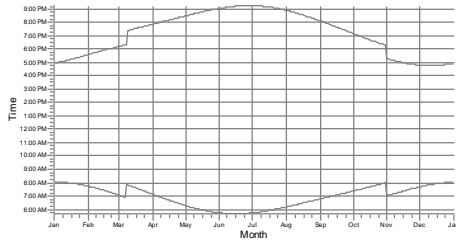
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6/24/2016 2:04 PM/3.0.654

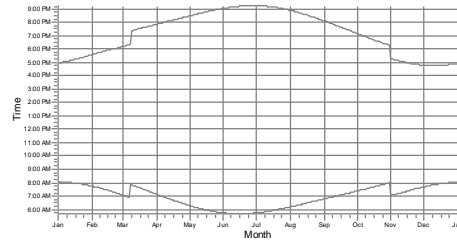
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

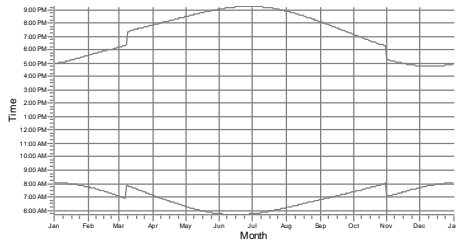
H460: H460



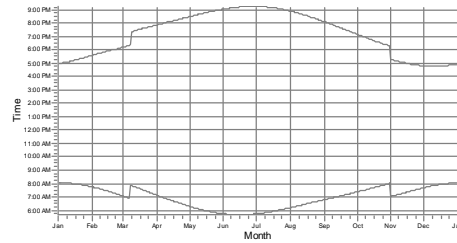
H461: H461



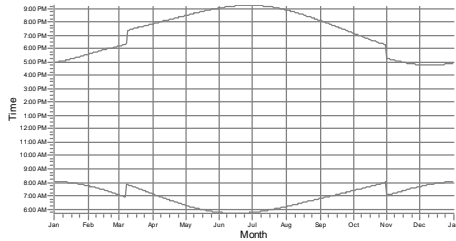
H462: H462



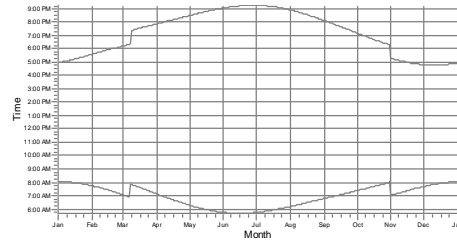
H463: H463



H464: H464



H465: H465



WTGs

Project:

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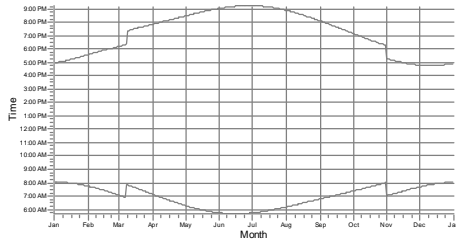
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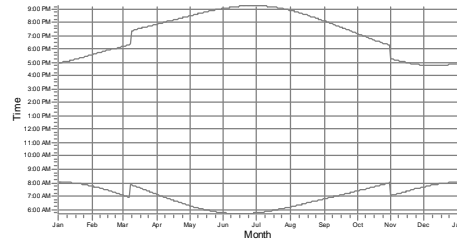
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

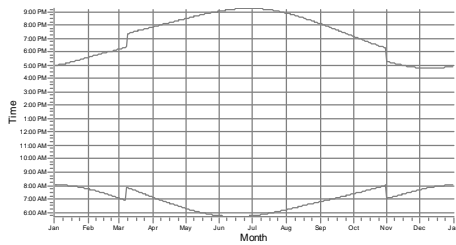
H466: H466



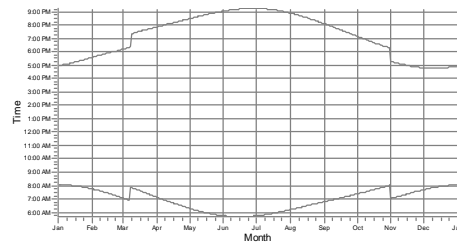
H467: H467



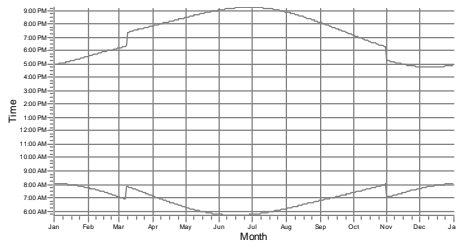
H468: H468



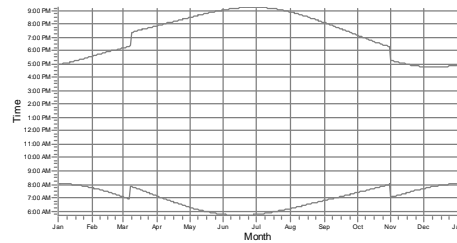
H469: H469



H470: H470



H471: H471



WTGs

Project:

20162030 Westwood Red Pine

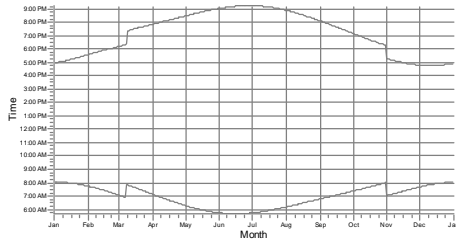
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Calculated:
6/24/2016 2:04 PM/3.0.654

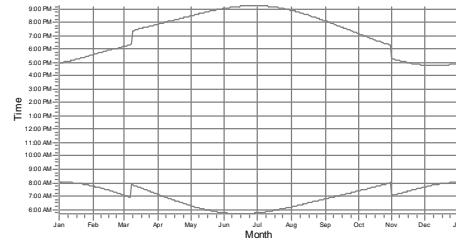
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

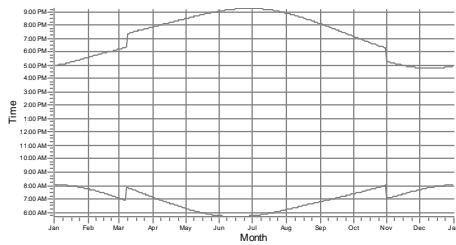
H472: H472



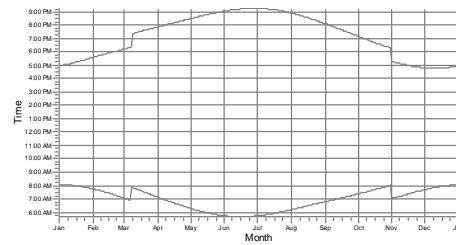
H473: H473



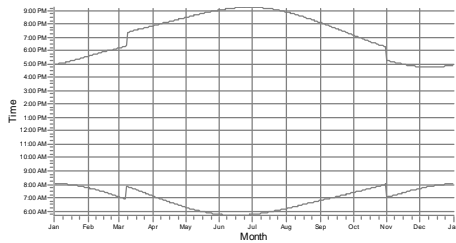
H474: H474



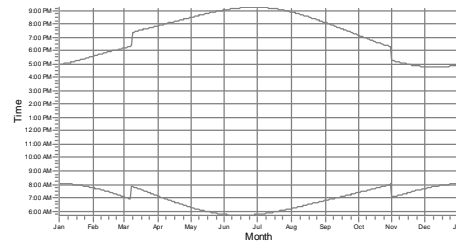
H475: H475



H476: H476



H477: H477



WTGs

Project:

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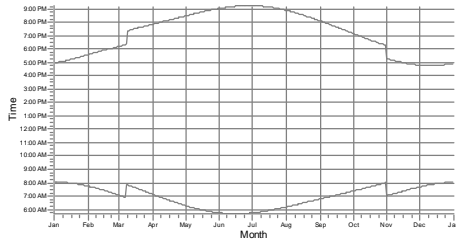
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Calculated:
6/24/2016 2:04 PM/3.0.654

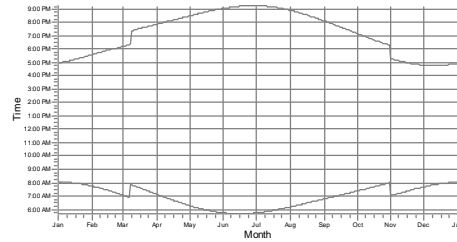
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

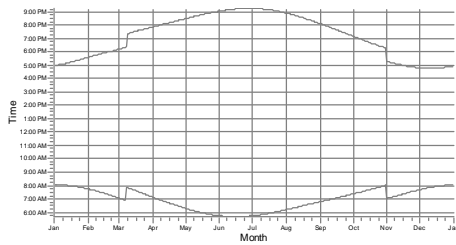
H478: H478



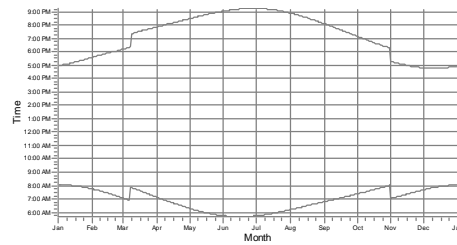
H479: H479



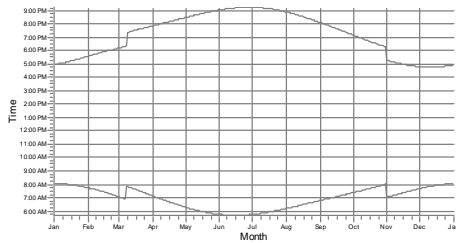
H480: H480



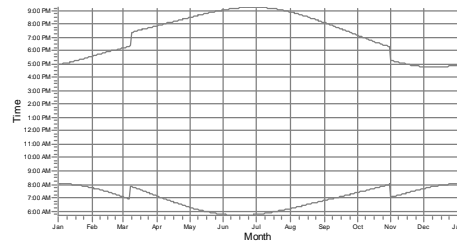
H481: H481



H482: H482



H483: H483



WTGs

Project:

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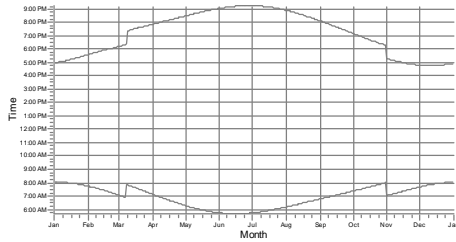
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Calculated:
6/24/2016 2:04 PM/3.0.654

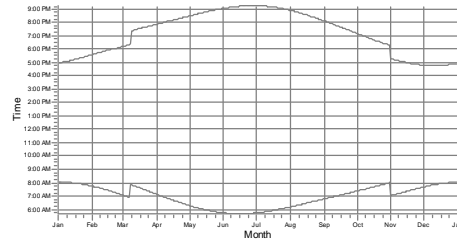
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

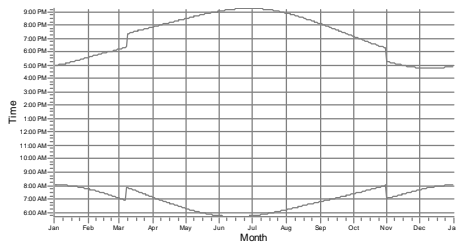
H484: H484



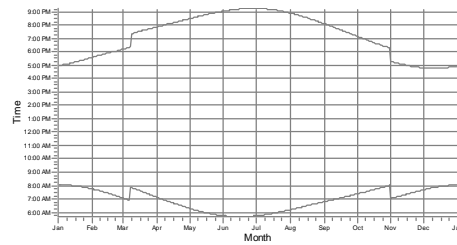
H485: H485



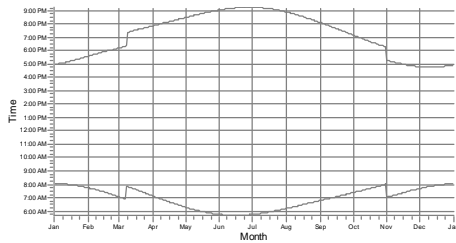
H486: H486



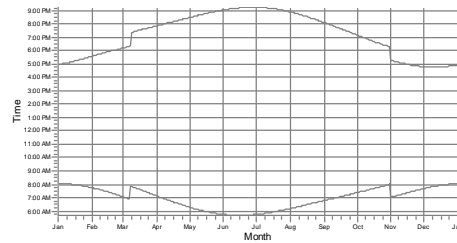
H487: H487



H488: H488



H489: H489



WTGs

Project:

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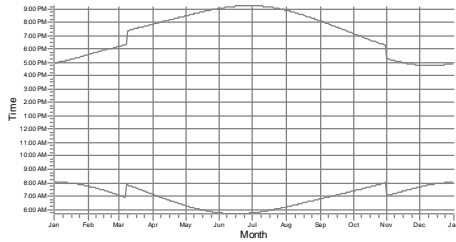
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Calculated:
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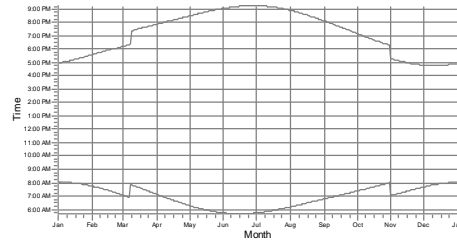
SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24

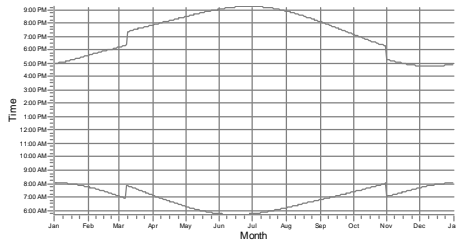
H490: H490



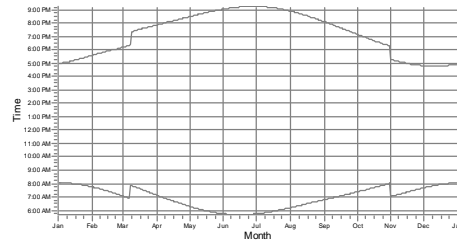
H491: H491



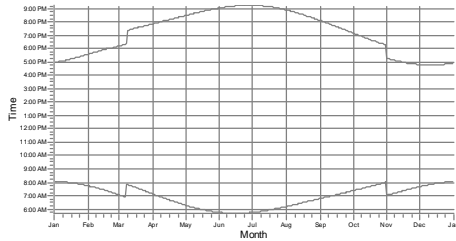
H492: H492



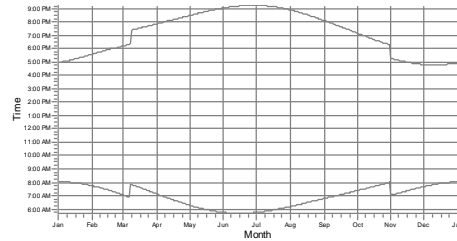
H493: H493



H494: H494



H495: H495



WTGs

Project:

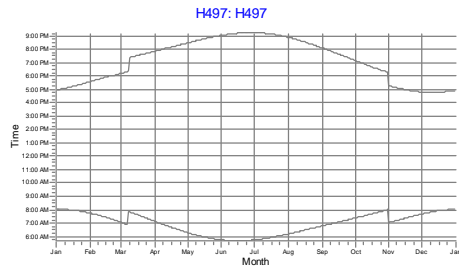
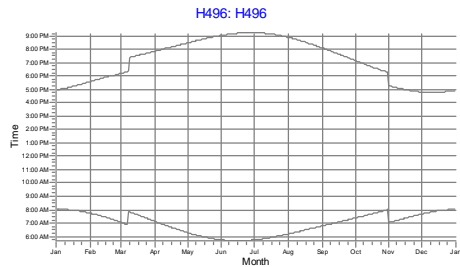
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SHADOW - Calendar, graphical

Calculation: V117-3.3 80m HH v24



WTGs

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

Assumptions for shadow calculations

Maximum distance for influence	1,500 m
Minimum sun height over horizon for influence	3 °
Day step for calculation	1 days
Time step for calculation	1 minutes

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational hours are calculated from WTGs in calculation and wind distribution:

2314 Provided

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:

Height contours used: Height Contours: 160310_Westwood_RedPine_10ftHCLsFr

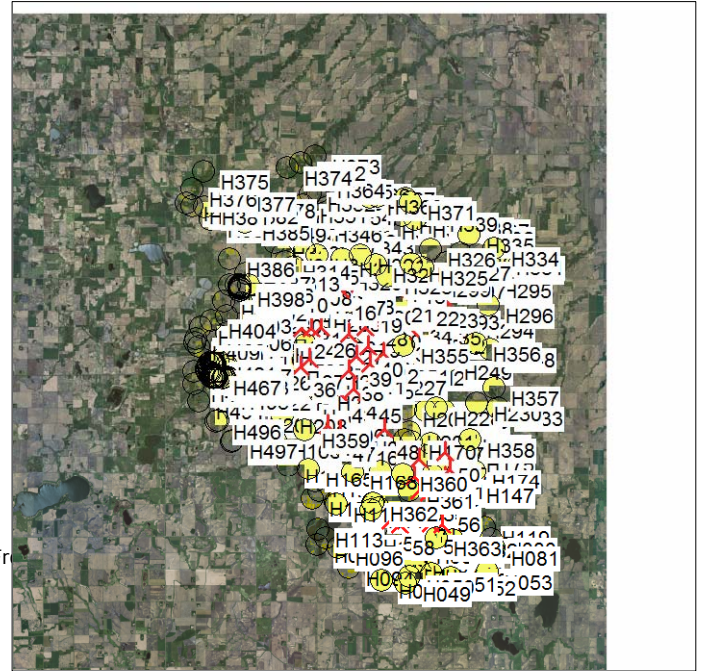
Obstacles used in calculation

Eye height: 1.5 m

Grid resolution: 10.0 m

All coordinates are in

UTM (north)-NAD83 (US+CA) Zone: 14



Scale 1:400,000

▲ New WTG

● Shadow receptor

WTGs

	Easting	Northing	Z	Row data/Description	WTG type						
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]
1	722,496	4,934,442	487.6	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
2	722,968	4,934,498	484.6	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
3	723,645	4,934,672	473.8	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
4	723,283	4,933,855	495.6	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
5	725,010	4,934,612	463.3	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
6	725,010	4,933,401	463.3	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
7	725,256	4,934,019	463.3	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
8	726,303	4,934,175	460.2	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
9	727,000	4,934,650	451.1	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
10	726,662	4,933,475	456.6	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
11	724,384	4,933,103	475.5	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
12	725,994	4,932,331	463.3	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
13	727,600	4,932,700	460.2	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
14	728,345	4,932,041	462.2	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
15	729,100	4,932,000	457.2	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
16	725,473	4,931,025	484.6	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
17	725,932	4,931,277	475.5	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
18	726,400	4,931,371	469.4	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
19	726,854	4,930,452	477.2	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
20	727,575	4,930,856	465.4	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
21	728,543	4,931,051	466.3	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
22	729,858	4,930,910	460.2	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
23	730,900	4,930,850	450.2	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
24	723,437	4,929,856	499.1	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
25	723,906	4,929,066	492.0	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
26	724,426	4,929,143	494.7	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
27	725,955	4,928,832	493.8	VESTAS V126-3.3 3300 126.0 IO! hub: 87.0 m (TOT: 1...Yes	Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8

To be continued on next page...

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

	Easting	Northing	Z	Row data/Description	WTG type		Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]
					Valid	Manufact.				
28	727,182	4,929,804	476.5	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
29	726,794	4,929,216	481.6	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
30	727,890	4,929,679	475.5	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
31	728,367	4,929,438	478.5	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
32	728,812	4,929,087	475.5	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
33	729,213	4,929,276	472.4	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
34	729,532	4,929,986	469.4	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
35	731,052	4,929,996	454.2	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
36	723,423	4,927,125	509.0	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
37	723,864	4,927,542	503.4	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
38	726,005	4,927,050	496.6	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
39	726,377	4,927,759	495.4	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
40	726,961	4,928,245	485.6	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
41	727,124	4,927,428	493.8	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
42	727,804	4,927,943	484.6	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
43	725,514	4,925,930	508.6	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
44	726,297	4,926,122	503.7	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
45	726,957	4,925,968	506.8	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
46	724,987	4,924,276	509.0	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
47	725,643	4,923,993	508.3	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
48	727,977	4,924,203	491.3	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
49	729,899	4,922,791	490.7	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
50	731,278	4,923,174	490.7	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
51	731,550	4,922,300	493.5	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
52	729,690	4,921,861	497.2	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
53	729,935	4,921,140	493.8	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
54	730,445	4,921,055	496.8	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
55	731,300	4,921,900	505.4	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
56	731,358	4,920,672	487.7	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
57	728,475	4,919,615	505.4	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
58	728,961	4,919,438	511.7	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
59	730,597	4,919,546	506.0	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8
60	731,219	4,919,512	504.8	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 1...Yes	VESTAS	V126-3.3-3,300	3,300	126.0	87.0	12.8

Shadow receptor-Input

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
		[m]	[m]	[m]	[m]	[m]	[m]	[°]	[°]	
H048	H048	728,115	4,916,639	516.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H049	H049	729,402	4,916,508	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H050	H050	729,569	4,916,874	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H051	H051	730,735	4,917,064	503.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H052	H052	731,794	4,916,898	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H053	H053	733,740	4,917,275	503.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H080	H080	733,892	4,918,871	496.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H081	H081	734,062	4,918,455	492.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H082	H082	731,822	4,918,771	504.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H083	H083	731,969	4,917,306	501.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H084	H084	731,115	4,917,750	504.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H085	H085	730,996	4,918,554	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H086	H086	730,055	4,918,409	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H087	H087	729,859	4,917,612	504.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H088	H088	729,346	4,918,466	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H090	H090	729,379	4,917,669	504.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H091	H091	728,270	4,918,198	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H092	H092	727,660	4,918,585	507.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H093	H093	727,196	4,918,680	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H094	H094	726,328	4,917,193	508.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H095	H095	725,053	4,918,637	503.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H096	H096	725,749	4,918,172	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H097	H097	724,605	4,918,290	505.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H112	H112	725,564	4,920,316	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H113	H113	724,645	4,919,053	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H114	H114	727,408	4,920,113	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H115	H115	727,195	4,918,789	503.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H116	H116	727,808	4,920,191	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H117	H117	728,824	4,918,918	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H118	H118	729,840	4,919,722	506.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H119	H119	733,501	4,919,439	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H147	H147	732,601	4,921,545	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H148	H148	731,968	4,921,946	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H149	H149	730,978	4,921,525	490.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H150	H150	730,614	4,921,987	493.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H151	H151	728,411	4,920,456	492.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H152	H152	727,560	4,920,426	493.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H153	H153	725,920	4,921,900	505.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H154	H154	725,506	4,920,392	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H155	H155	724,610	4,920,935	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H156	H156	724,389	4,921,420	506.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H157	H157	724,262	4,920,563	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H161	H161	719,874	4,923,300	527.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H163	H163	722,237	4,923,405	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H165	H165	724,007	4,922,031	510.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H166	H166	722,929	4,922,208	512.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H167	H167	725,905	4,923,197	505.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H168	H168	726,376	4,921,996	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H169	H169	727,888	4,922,075	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H170	H170	729,447	4,923,620	485.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H171	H171	730,476	4,923,553	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H172	H172	730,448	4,922,958	484.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H173	H173	730,945	4,922,563	494.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H174	H174	732,896	4,922,239	494.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H175	H175	732,529	4,923,110	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H198	H198	732,299	4,924,009	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H199	H199	731,149	4,925,228	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H200	H200	730,170	4,925,171	494.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H201	H201	729,315	4,924,087	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H202	H202	729,062	4,925,235	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H203	H203	729,073	4,923,692	480.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H204	H204	726,516	4,923,705	496.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H206	H206	724,535	4,924,268	514.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H207	H207	723,763	4,925,198	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H208	H208	722,520	4,924,652	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H209	H209	720,913	4,924,651	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H210	H210	719,507	4,926,626	512.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H211	H211	719,523	4,926,471	514.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H212	H212	719,508	4,926,363	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H213	H213	719,505	4,926,222	515.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H214	H214	719,520	4,925,949	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H215	H215	719,559	4,925,707	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H217	H217	720,364	4,926,560	506.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H220	H220	721,714	4,926,403	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H221	H221	721,151	4,925,769	501.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H222	H222	724,090	4,926,435	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H224	H224	724,495	4,925,892	497.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H225	H225	727,070	4,926,781	494.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H226	H226	726,032	4,926,532	502.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H227	H227	727,725	4,926,770	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H228	H228	730,741	4,925,336	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H230	H230	732,867	4,925,647	469.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H233	H233	733,996	4,925,469	453.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H248	H248	733,466	4,928,352	430.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H249	H249	731,198	4,927,668	473.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H250	H250	729,945	4,927,311	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H251	H251	727,868	4,927,277	486.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H252	H252	727,174	4,926,976	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H253	H253	726,136	4,928,157	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H254	H254	725,409	4,926,953	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H255	H255	724,906	4,926,938	505.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H257	H257	723,631	4,928,266	501.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H258	H258	722,827	4,927,341	502.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H259	H259	722,426	4,928,074	502.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H260	H260	722,146	4,928,204	507.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H261	H261	721,153	4,926,772	500.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H262	H262	720,658	4,927,958	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H278	H278	720,561	4,928,494	507.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H279	H279	720,947	4,929,553	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H280	H280	721,059	4,929,572	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H281	H281	722,112	4,928,971	502.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H282	H282	722,047	4,929,705	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H283	H283	722,783	4,929,036	500.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H284	H284	723,329	4,929,926	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H285	H285	724,173	4,929,776	495.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H286	H286	724,573	4,928,599	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H287	H287	726,685	4,928,739	479.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H288	H288	725,925	4,929,877	478.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H289	H289	727,931	4,928,837	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H292	H292	729,748	4,928,899	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H293	H293	730,428	4,930,100	457.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H294	H294	732,309	4,929,759	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H295	H295	733,156	4,931,801	423.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H296	H296	733,299	4,930,528	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H297	H297	730,732	4,931,660	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H299	H299	729,943	4,931,746	451.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H300	H300	728,657	4,930,240	468.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H301	H301	727,843	4,931,649	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H302	H302	728,688	4,931,663	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H303	H303	726,149	4,930,379	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H305	H305	724,247	4,930,703	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H307	H307	723,993	4,931,431	483.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H308	H308	722,594	4,931,039	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H309	H309	722,171	4,931,027	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H310	H310	721,293	4,930,646	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H311	H311	721,574	4,931,459	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H312	H312	720,950	4,931,718	506.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H313	H313	721,869	4,931,720	506.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H314	H314	722,445	4,932,328	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H315	H315	722,907	4,932,108	484.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H316	H316	722,291	4,932,632	478.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H317	H317	723,428	4,932,915	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H318	H318	724,132	4,932,703	476.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H319	H319	725,462	4,932,557	465.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H320	H320	725,235	4,931,900	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H321	H321	726,401	4,932,818	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H322	H322	727,242	4,932,330	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H323	H323	727,883	4,931,792	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H324	H324	729,140	4,932,472	451.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H325	H325	729,778	4,932,315	448.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H326	H326	730,143	4,933,232	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H327	H327	730,991	4,932,569	435.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H328	H328	731,748	4,933,066	426.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H330	H330	733,715	4,932,788	410.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H331	H331	733,786	4,932,965	411.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H334	H334	733,512	4,933,404	403.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H335	H335	732,170	4,934,010	415.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H336	H336	732,168	4,934,316	405.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H337	H337	731,900	4,934,701	410.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H338	H338	731,026	4,934,775	415.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H339	H339	730,162	4,934,981	423.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H340	H340	729,245	4,934,684	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H341	H341	728,538	4,934,833	436.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H342	H342	727,624	4,934,523	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H343	H343	725,770	4,933,628	460.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H345	H345	724,138	4,933,926	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H346	H346	724,049	4,934,248	467.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H347	H347	723,930	4,933,727	474.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H348	H348	721,813	4,933,283	475.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H349	H349	721,098	4,934,128	483.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H350	H350	721,670	4,934,790	486.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H351	H351	723,260	4,935,189	469.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H352	H352	723,642	4,935,778	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H353	H353	724,065	4,935,805	460.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H354	H354	724,602	4,935,135	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H355	H355	728,849	4,928,393	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H356	H356	732,723	4,928,604	421.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H357	H357	733,778	4,926,437	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H358	H358	732,570	4,923,836	473.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H359	H359	723,754	4,924,013	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H360	H360	729,031	4,921,984	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H361	H361	729,422	4,921,135	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H362	H362	727,502	4,920,433	493.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H363	H363	730,944	4,918,814	507.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H364	H364	724,155	4,936,433	454.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H365	H365	724,528	4,936,423	453.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H366	H366	725,463	4,936,235	451.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H367	H367	726,789	4,936,117	441.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H368	H368	726,834	4,935,674	444.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H369	H369	727,227	4,935,749	439.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H370	H370	728,722	4,935,700	431.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H371	H371	728,990	4,935,533	424.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H372	H372	723,087	4,937,254	432.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H373	H373	723,847	4,937,637	429.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H374	H374	722,400	4,937,023	442.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H375	H375	717,939	4,936,666	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H376	H376	717,348	4,935,787	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H377	H377	719,427	4,935,624	483.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H378	H378	720,478	4,935,343	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H379	H379	717,052	4,935,051	491.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H380	H380	717,361	4,934,918	490.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H381	H381	718,033	4,934,915	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H382	H382	719,570	4,934,987	483.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H383	H383	718,939	4,934,649	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H384	H384	718,363	4,934,282	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H385	H385	720,227	4,934,216	473.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H386	H386	719,469	4,932,351	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H387	H387	720,374	4,931,680	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H388	H388	719,527	4,931,060	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H389	H389	719,883	4,931,108	502.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H390	H390	720,045	4,931,077	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H391	H391	720,045	4,931,054	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H392	H392	720,043	4,931,025	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H393	H393	720,047	4,930,997	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H394	H394	720,058	4,930,934	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H395	H395	720,050	4,931,112	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H396	H396	720,520	4,931,120	505.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H397	H397	720,056	4,930,918	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H398	H398	720,056	4,930,883	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H399	H399	720,026	4,930,818	502.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H400	H400	720,090	4,930,817	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H401	H401	719,212	4,930,271	506.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H402	H402	720,196	4,930,196	501.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H403	H403	719,426	4,929,541	503.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H404	H404	718,603	4,929,272	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H405	H405	718,065	4,928,934	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H406	H406	719,426	4,928,658	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H407	H407	718,741	4,928,291	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H408	H408	717,825	4,928,342	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H409	H409	717,737	4,928,130	506.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H410	H410	717,968	4,927,972	503.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H411	H411	719,345	4,927,841	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H412	H412	718,640	4,927,210	509.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H413	H413	718,674	4,927,202	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H414	H414	718,719	4,927,194	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H415	H415	718,746	4,927,190	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H416	H416	718,650	4,927,138	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H417	H417	718,524	4,927,140	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H418	H418	718,773	4,927,185	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H419	H419	718,717	4,927,134	511.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H420	H420	718,719	4,927,122	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H421	H421	718,649	4,927,122	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H422	H422	718,762	4,927,140	510.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H423	H423	718,760	4,927,123	511.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H424	H424	718,831	4,927,126	509.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H425	H425	718,888	4,927,123	508.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H426	H426	719,017	4,927,257	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H427	H427	719,468	4,927,074	503.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H428	H428	719,572	4,926,856	509.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H429	H429	719,530	4,926,789	512.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H430	H430	719,534	4,926,763	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H431	H431	719,490	4,926,738	512.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H432	H432	719,408	4,926,829	509.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H433	H433	719,403	4,926,777	510.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H434	H434	719,380	4,926,829	509.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H435	H435	719,399	4,926,968	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H436	H436	719,399	4,926,945	506.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H437	H437	719,377	4,927,021	505.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H438	H438	719,351	4,927,025	505.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H439	H439	719,328	4,927,030	505.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H440	H440	719,234	4,927,054	507.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H441	H441	719,169	4,927,074	507.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H442	H442	719,070	4,927,094	507.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H443	H443	718,996	4,927,108	507.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H444	H444	718,923	4,927,121	507.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H445	H445	718,421	4,926,841	509.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H446	H446	718,434	4,926,862	510.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H447	H447	718,493	4,926,914	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H448	H448	718,492	4,926,941	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H449	H449	718,495	4,926,956	513.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H450	H450	718,491	4,927,025	513.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H451	H451	718,426	4,926,767	510.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H452	H452	717,742	4,926,689	510.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H453	H453	718,452	4,926,708	511.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H454	H454	718,493	4,926,708	512.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H455	H455	718,554	4,926,754	514.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H456	H456	718,619	4,926,695	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H457	H457	718,680	4,926,647	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H458	H458	718,731	4,926,613	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H459	H459	718,735	4,926,591	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H460	H460	718,736	4,926,532	514.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H461	H461	718,737	4,926,501	514.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H462	H462	718,738	4,926,469	513.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H463	H463	718,669	4,926,475	514.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H464	H464	718,782	4,926,469	513.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H465	H465	718,848	4,926,463	513.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H466	H466	718,896	4,926,471	513.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H467	H467	718,961	4,926,477	512.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H468	H468	719,015	4,926,468	512.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H469	H469	719,076	4,926,472	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H470	H470	719,121	4,926,477	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H471	H471	719,215	4,926,502	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H472	H472	719,307	4,926,427	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H473	H473	719,352	4,926,461	514.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H474	H474	719,383	4,926,461	514.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H475	H475	719,464	4,926,375	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H476	H476	719,576	4,926,416	514.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H477	H477	719,566	4,926,470	514.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H478	H478	719,535	4,926,339	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H479	H479	719,536	4,926,309	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H480	H480	719,536	4,926,284	515.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H481	H481	719,537	4,926,259	515.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H482	H482	719,541	4,926,230	515.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H483	H483	719,534	4,926,180	516.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H484	H484	719,544	4,925,995	518.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H485	H485	719,511	4,926,019	517.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H486	H486	719,492	4,926,169	516.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H487	H487	719,477	4,926,230	516.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H488	H488	719,487	4,926,336	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H489	H489	719,102	4,926,261	515.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H490	H490	719,043	4,926,243	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H491	H491	719,175	4,926,227	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H492	H492	717,799	4,926,069	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H493	H493	719,379	4,925,767	520.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H494	H494	718,045	4,925,241	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H495	H495	719,130	4,924,317	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H496	H496	719,026	4,924,271	523.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H497	H497	719,904	4,923,356	529.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
 3100 DeMers Avenue
 US-GRAND FORKS, ND 58201
 +1 701 775 3000
 Jay Haley / jhaley@eapc.net
 Calculated:
 6/24/2016 3:33 PM/3.0.654

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

Calculation Results

Shadow receptor

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H048	H048	0:00	0	0:00	0:00
H049	H049	0:00	0	0:00	0:00
H050	H050	0:00	0	0:00	0:00
H051	H051	0:00	0	0:00	0:00
H052	H052	0:00	0	0:00	0:00
H053	H053	0:00	0	0:00	0:00
H080	H080	0:00	0	0:00	0:00
H081	H081	0:00	0	0:00	0:00
H082	H082	0:00	0	0:00	0:00
H083	H083	0:00	0	0:00	0:00
H084	H084	0:00	0	0:00	0:00
H085	H085	0:00	0	0:00	0:00
H086	H086	0:00	0	0:00	0:00
H087	H087	0:00	0	0:00	0:00
H088	H088	0:00	0	0:00	0:00
H090	H090	0:00	0	0:00	0:00
H091	H091	0:00	0	0:00	0:00
H092	H092	0:00	0	0:00	0:00
H093	H093	0:00	0	0:00	0:00
H094	H094	0:00	0	0:00	0:00
H095	H095	0:00	0	0:00	0:00
H096	H096	0:00	0	0:00	0:00
H097	H097	0:00	0	0:00	0:00
H112	H112	0:00	0	0:00	0:00
H113	H113	0:00	0	0:00	0:00
H114	H114	10:39	38	0:25	3:55
H115	H115	0:00	0	0:00	0:00
H116	H116	43:23	74	0:45	15:27
H117	H117	0:00	0	0:00	0:00
H118	H118	43:24	75	1:09	15:26
H119	H119	0:00	0	0:00	0:00
H147	H147	7:39	35	0:20	3:14
H148	H148	29:02	56	0:44	10:44
H149	H149	74:29	158	0:44	22:35
H150	H150	59:20	103	1:12	22:06
H151	H151	0:00	0	0:00	0:00
H152	H152	5:14	25	0:16	1:46
H153	H153	0:00	0	0:00	0:00
H154	H154	0:00	0	0:00	0:00
H155	H155	0:00	0	0:00	0:00
H156	H156	0:00	0	0:00	0:00
H157	H157	0:00	0	0:00	0:00
H161	H161	0:00	0	0:00	0:00
H163	H163	0:00	0	0:00	0:00
H165	H165	0:00	0	0:00	0:00
H166	H166	0:00	0	0:00	0:00
H167	H167	0:00	0	0:00	0:00
H168	H168	0:00	0	0:00	0:00
H169	H169	0:00	0	0:00	0:00
H170	H170	0:00	0	0:00	0:00
H171	H171	21:36	51	0:34	8:10
H172	H172	75:51	168	0:51	26:03
H173	H173	52:43	108	0:53	20:10
H174	H174	5:02	26	0:17	1:56
H175	H175	25:13	91	0:24	7:50
H198	H198	19:12	66	0:24	5:28
H199	H199	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Shadow, worst case			Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]	
H200	H200	0:00	0	0:00	0:00	
H201	H201	5:21	27	0:18	2:07	
H202	H202	0:19	6	0:04	0:05	
H203	H203	22:47	70	0:26	10:40	
H204	H204	28:59	74	0:33	12:49	
H206	H206	76:52	119	1:04	29:22	
H207	H207	0:00	0	0:00	0:00	
H208	H208	0:00	0	0:00	0:00	
H209	H209	0:00	0	0:00	0:00	
H210	H210	0:00	0	0:00	0:00	
H211	H211	0:00	0	0:00	0:00	
H212	H212	0:00	0	0:00	0:00	
H213	H213	0:00	0	0:00	0:00	
H214	H214	0:00	0	0:00	0:00	
H215	H215	0:00	0	0:00	0:00	
H217	H217	0:00	0	0:00	0:00	
H220	H220	0:00	0	0:00	0:00	
H221	H221	0:00	0	0:00	0:00	
H222	H222	0:00	0	0:00	0:00	
H224	H224	12:19	36	0:29	4:36	
H225	H225	43:11	114	0:31	13:51	
H226	H226	61:22	90	1:16	20:41	
H227	H227	9:25	34	0:21	2:34	
H228	H228	0:00	0	0:00	0:00	
H230	H230	0:00	0	0:00	0:00	
H233	H233	0:00	0	0:00	0:00	
H248	H248	0:00	0	0:00	0:00	
H249	H249	0:00	0	0:00	0:00	
H250	H250	0:00	0	0:00	0:00	
H251	H251	31:08	64	0:40	13:01	
H252	H252	17:41	67	0:23	5:42	
H253	H253	59:17	102	1:02	21:37	
H254	H254	41:49	70	0:49	15:29	
H255	H255	15:21	77	0:25	6:05	
H257	H257	0:00	0	0:00	0:00	
H258	H258	48:31	102	0:46	18:34	
H259	H259	0:00	0	0:00	0:00	
H260	H260	0:00	0	0:00	0:00	
H261	H261	0:00	0	0:00	0:00	
H262	H262	0:00	0	0:00	0:00	
H278	H278	0:00	0	0:00	0:00	
H279	H279	0:00	0	0:00	0:00	
H280	H280	0:00	0	0:00	0:00	
H281	H281	5:07	26	0:18	1:54	
H282	H282	0:00	0	0:00	0:00	
H283	H283	31:40	58	0:45	11:58	
H284	H284	12:32	54	0:18	4:25	
H285	H285	17:53	46	0:29	4:54	
H286	H286	21:33	88	0:24	9:22	
H287	H287	46:33	120	0:40	18:19	
H288	H288	44:09	143	0:29	16:33	
H289	H289	47:21	121	0:50	17:15	
H292	H292	23:18	85	0:31	9:56	
H293	H293	56:45	108	1:10	20:32	
H294	H294	7:51	32	0:22	3:13	
H295	H295	0:00	0	0:00	0:00	
H296	H296	0:00	0	0:00	0:00	
H297	H297	25:03	66	0:28	7:05	

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SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H299	H299	27:19	68	0:35	11:52
H300	H300	60:14	186	0:33	21:09
H301	H301	36:20	109	0:34	12:55
H302	H302	19:16	62	0:37	6:19
H303	H303	39:47	101	0:41	14:49
H305	H305	6:37	31	0:20	2:20
H307	H307	0:00	0	0:00	0:00
H308	H308	0:00	0	0:00	0:00
H309	H309	0:00	0	0:00	0:00
H310	H310	0:00	0	0:00	0:00
H311	H311	0:00	0	0:00	0:00
H312	H312	0:00	0	0:00	0:00
H313	H313	0:00	0	0:00	0:00
H314	H314	0:00	0	0:00	0:00
H315	H315	0:00	0	0:00	0:00
H316	H316	0:00	0	0:00	0:00
H317	H317	13:04	42	0:28	4:45
H318	H318	0:00	0	0:00	0:00
H319	H319	61:21	132	0:51	25:04
H320	H320	56:12	155	0:33	21:21
H321	H321	44:16	90	0:46	13:23
H322	H322	14:46	60	0:24	5:33
H323	H323	69:08	110	0:59	26:46
H324	H324	19:36	51	0:33	6:13
H325	H325	31:43	79	0:39	10:28
H326	H326	0:00	0	0:00	0:00
H327	H327	0:00	0	0:00	0:00
H328	H328	0:00	0	0:00	0:00
H330	H330	0:00	0	0:00	0:00
H331	H331	0:00	0	0:00	0:00
H334	H334	0:00	0	0:00	0:00
H335	H335	0:00	0	0:00	0:00
H336	H336	0:00	0	0:00	0:00
H337	H337	0:00	0	0:00	0:00
H338	H338	0:00	0	0:00	0:00
H339	H339	0:00	0	0:00	0:00
H340	H340	0:00	0	0:00	0:00
H341	H341	0:00	0	0:00	0:00
H342	H342	53:53	108	0:47	22:03
H343	H343	37:39	63	1:05	12:57
H345	H345	62:06	172	0:49	24:36
H346	H346	57:25	137	0:45	20:59
H347	H347	58:49	128	0:45	24:11
H348	H348	0:00	0	0:00	0:00
H349	H349	5:07	26	0:17	1:50
H350	H350	23:24	71	0:33	8:55
H351	H351	21:24	52	0:35	5:57
H352	H352	0:00	0	0:00	0:00
H353	H353	0:00	0	0:00	0:00
H354	H354	12:43	41	0:28	4:08
H355	H355	11:11	36	0:26	3:41
H356	H356	0:00	0	0:00	0:00
H357	H357	0:00	0	0:00	0:00
H358	H358	6:10	30	0:19	1:56
H359	H359	7:41	32	0:22	2:46
H360	H360	28:26	56	0:43	10:46
H361	H361	55:47	89	0:56	21:16
H362	H362	9:53	36	0:21	3:24

To be continued on next page...

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H363	H363	0:00	0	0:00	0:00
H364	H364	0:00	0	0:00	0:00
H365	H365	0:00	0	0:00	0:00
H366	H366	0:00	0	0:00	0:00
H367	H367	0:00	0	0:00	0:00
H368	H368	0:00	0	0:00	0:00
H369	H369	0:00	0	0:00	0:00
H370	H370	0:00	0	0:00	0:00
H371	H371	0:00	0	0:00	0:00
H372	H372	0:00	0	0:00	0:00
H373	H373	0:00	0	0:00	0:00
H374	H374	0:00	0	0:00	0:00
H375	H375	0:00	0	0:00	0:00
H376	H376	0:00	0	0:00	0:00
H377	H377	0:00	0	0:00	0:00
H378	H378	0:00	0	0:00	0:00
H379	H379	0:00	0	0:00	0:00
H380	H380	0:00	0	0:00	0:00
H381	H381	0:00	0	0:00	0:00
H382	H382	0:00	0	0:00	0:00
H383	H383	0:00	0	0:00	0:00
H384	H384	0:00	0	0:00	0:00
H385	H385	0:00	0	0:00	0:00
H386	H386	0:00	0	0:00	0:00
H387	H387	0:00	0	0:00	0:00
H388	H388	0:00	0	0:00	0:00
H389	H389	0:00	0	0:00	0:00
H390	H390	0:00	0	0:00	0:00
H391	H391	0:00	0	0:00	0:00
H392	H392	0:00	0	0:00	0:00
H393	H393	0:00	0	0:00	0:00
H394	H394	0:00	0	0:00	0:00
H395	H395	0:00	0	0:00	0:00
H396	H396	0:00	0	0:00	0:00
H397	H397	0:00	0	0:00	0:00
H398	H398	0:00	0	0:00	0:00
H399	H399	0:00	0	0:00	0:00
H400	H400	0:00	0	0:00	0:00
H401	H401	0:00	0	0:00	0:00
H402	H402	0:00	0	0:00	0:00
H403	H403	0:00	0	0:00	0:00
H404	H404	0:00	0	0:00	0:00
H405	H405	0:00	0	0:00	0:00
H406	H406	0:00	0	0:00	0:00
H407	H407	0:00	0	0:00	0:00
H408	H408	0:00	0	0:00	0:00
H409	H409	0:00	0	0:00	0:00
H410	H410	0:00	0	0:00	0:00
H411	H411	0:00	0	0:00	0:00
H412	H412	0:00	0	0:00	0:00
H413	H413	0:00	0	0:00	0:00
H414	H414	0:00	0	0:00	0:00
H415	H415	0:00	0	0:00	0:00
H416	H416	0:00	0	0:00	0:00
H417	H417	0:00	0	0:00	0:00
H418	H418	0:00	0	0:00	0:00
H419	H419	0:00	0	0:00	0:00
H420	H420	0:00	0	0:00	0:00

To be continued on next page...

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H421	H421	0:00	0	0:00	0:00
H422	H422	0:00	0	0:00	0:00
H423	H423	0:00	0	0:00	0:00
H424	H424	0:00	0	0:00	0:00
H425	H425	0:00	0	0:00	0:00
H426	H426	0:00	0	0:00	0:00
H427	H427	0:00	0	0:00	0:00
H428	H428	0:00	0	0:00	0:00
H429	H429	0:00	0	0:00	0:00
H430	H430	0:00	0	0:00	0:00
H431	H431	0:00	0	0:00	0:00
H432	H432	0:00	0	0:00	0:00
H433	H433	0:00	0	0:00	0:00
H434	H434	0:00	0	0:00	0:00
H435	H435	0:00	0	0:00	0:00
H436	H436	0:00	0	0:00	0:00
H437	H437	0:00	0	0:00	0:00
H438	H438	0:00	0	0:00	0:00
H439	H439	0:00	0	0:00	0:00
H440	H440	0:00	0	0:00	0:00
H441	H441	0:00	0	0:00	0:00
H442	H442	0:00	0	0:00	0:00
H443	H443	0:00	0	0:00	0:00
H444	H444	0:00	0	0:00	0:00
H445	H445	0:00	0	0:00	0:00
H446	H446	0:00	0	0:00	0:00
H447	H447	0:00	0	0:00	0:00
H448	H448	0:00	0	0:00	0:00
H449	H449	0:00	0	0:00	0:00
H450	H450	0:00	0	0:00	0:00
H451	H451	0:00	0	0:00	0:00
H452	H452	0:00	0	0:00	0:00
H453	H453	0:00	0	0:00	0:00
H454	H454	0:00	0	0:00	0:00
H455	H455	0:00	0	0:00	0:00
H456	H456	0:00	0	0:00	0:00
H457	H457	0:00	0	0:00	0:00
H458	H458	0:00	0	0:00	0:00
H459	H459	0:00	0	0:00	0:00
H460	H460	0:00	0	0:00	0:00
H461	H461	0:00	0	0:00	0:00
H462	H462	0:00	0	0:00	0:00
H463	H463	0:00	0	0:00	0:00
H464	H464	0:00	0	0:00	0:00
H465	H465	0:00	0	0:00	0:00
H466	H466	0:00	0	0:00	0:00
H467	H467	0:00	0	0:00	0:00
H468	H468	0:00	0	0:00	0:00
H469	H469	0:00	0	0:00	0:00
H470	H470	0:00	0	0:00	0:00
H471	H471	0:00	0	0:00	0:00
H472	H472	0:00	0	0:00	0:00
H473	H473	0:00	0	0:00	0:00
H474	H474	0:00	0	0:00	0:00
H475	H475	0:00	0	0:00	0:00
H476	H476	0:00	0	0:00	0:00
H477	H477	0:00	0	0:00	0:00
H478	H478	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H479	H479	0:00	0	0:00	0:00
H480	H480	0:00	0	0:00	0:00
H481	H481	0:00	0	0:00	0:00
H482	H482	0:00	0	0:00	0:00
H483	H483	0:00	0	0:00	0:00
H484	H484	0:00	0	0:00	0:00
H485	H485	0:00	0	0:00	0:00
H486	H486	0:00	0	0:00	0:00
H487	H487	0:00	0	0:00	0:00
H488	H488	0:00	0	0:00	0:00
H489	H489	0:00	0	0:00	0:00
H490	H490	0:00	0	0:00	0:00
H491	H491	0:00	0	0:00	0:00
H492	H492	0:00	0	0:00	0:00
H493	H493	0:00	0	0:00	0:00
H494	H494	0:00	0	0:00	0:00
H495	H495	0:00	0	0:00	0:00
H496	H496	0:00	0	0:00	0:00
H497	H497	0:00	0	0:00	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1504)	44:00	14:33
2	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1471)	36:31	15:45
3	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1496)	13:20	4:18
4	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1508)	87:19	33:36
5	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1472)	15:42	6:05
6	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1509)	46:08	16:25
7	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1510)	18:47	6:59
8	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1506)	5:52	1:52
9	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1494)	48:01	20:13
10	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1500)	14:20	5:01
11	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1511)	33:47	13:50
12	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1512)	118:57	42:25
13	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1498)	6:43	2:33
14	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1493)	95:21	35:22
15	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1505)	67:06	25:20
16	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1469)	6:37	2:20
17	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1492)	19:22	6:47
18	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1497)	11:28	4:05
19	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1465)	41:34	15:46
20	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1491)	13:12	4:37
21	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1503)	25:59	9:10
22	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1502)	50:27	16:40
23	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1462)	0:00	0:00
24	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1487)	66:21	24:31
25	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1477)	7:34	2:49
26	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1467)	12:32	4:25
27	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1460)	35:53	14:27
28	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1513)	17:37	6:28
29	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1483)	37:37	14:15
30	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1473)	25:17	7:25
31	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1514)	7:15	3:16
32	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1476)	35:04	13:38
33	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1466)	14:36	4:48
34	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1480)	31:44	11:53

To be continued on next page...

SHADOW - Main Result

Calculation: V126-3.3 87m HH v25

...continued from previous page

No.	Name	Worst case [h/year]	Expected [h/year]
35	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1507)	40:35	15:28
36	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1459)	41:13	16:01
37	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1479)	14:19	5:32
38	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1485)	63:43	24:26
39	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1515)	23:50	8:26
40	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1478)	30:20	10:18
41	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1461)	49:19	19:34
42	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1474)	26:54	9:16
43	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1468)	30:30	10:34
44	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1489)	58:58	17:49
45	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1457)	26:59	8:54
46	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1490)	76:46	29:14
47	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1482)	36:46	15:43
48	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1495)	28:27	12:53
49	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1470)	53:28	18:32
50	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1464)	75:51	26:07
51	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1458)	87:03	30:51
52	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1484)	55:34	21:05
53	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1488)	61:44	23:02
54	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1463)	67:43	20:13
55	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1456)	65:36	24:47
56	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1501)	0:00	0:00
57	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1499)	45:08	16:10
58	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1475)	28:27	10:08
59	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1481)	21:30	7:39
60	VESTAS V126-3.3 3300 126.0 !O! hub: 87.0 m (TOT: 150.0 m) (1486)	4:26	1:35

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H048 - H048

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:24	20:57	21:13	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H049 - H049

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H050 - H050

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H051 - H051

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H052 - H052

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:45
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:58	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:29	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:06	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
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29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H053 - H053

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:50	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:12	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:00	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:36	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:24	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:35	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:05	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:37	07:13	07:50	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:43	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H080 - H080

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:50	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H081 - H081

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:50	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:00	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:36	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:47	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:35	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
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	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:02	06:37	07:13	07:50	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H082 - H082

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:06	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H083 - H083

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:45
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:58	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:06	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H084 - H084

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H085 - H085

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
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	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H086 - H086

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:40	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H087 - H087

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H088 - H088

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
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	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
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	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
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	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:46
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	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
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	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
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	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
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	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:40	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H090 - H090

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H091 - H091

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:22	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:20	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53	16:53
30	07:46	07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01	16:53
	17:31	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54	16:54
31	07:45	07:09	07:19	06:19	05:45	06:10	06:46	07:22	07:59	07:39	08:01	16:54
	17:32	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:16	16:47	16:55	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H092 - H092

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:20	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:14	20:55	20:10	19:13	18:20	16:48	16:53	16:53
30	07:46	07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01	16:53
	17:31	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54	16:54
31	07:45	07:09	07:19	06:19	05:45	06:10	06:46	07:22	07:59	07:39	08:01	16:54
	17:32	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:16	16:47	16:55	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H093 - H093

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H094 - H094

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H095 - H095

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H096 - H096

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
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28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
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	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H097 - H097

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:12	16:47
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
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8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
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	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:16	07:52
	17:08	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:47
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:36	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
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Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
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SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H112 - H112

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Operational time

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Idle start wind speed: Cut in wind speed from power curve

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	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
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	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
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9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H113 - H113

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:47
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H114 - H114

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:01	07:44	08:06 (57)	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:40				
	16:56	17:34	13	08:19 (57)	18:11	19:50	20:27	21:01	21:13	20:52	20:04	17:15	24	07:51 (57)	16:47	
2	08:01	07:43	08:05 (57)	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:27 (57)	16:41		
	16:57	17:35	15	08:20 (57)	18:12	19:52	20:28	21:02	21:13	20:51	20:03	17:14	25	07:52 (57)	16:47	
3	08:01	07:42	08:04 (57)	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:27 (57)	16:43		
	16:58	17:36	17	08:21 (57)	18:14	19:53	20:30	21:03	21:13	20:50	20:01	17:13	25	07:52 (57)	16:47	
4	08:01	07:41	08:02 (57)	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:06	07:28 (57)	16:44		
	16:59	17:38	19	08:21 (57)	18:15	19:54	20:31	21:04	21:13	20:48	19:59	17:11	23	07:51 (57)	16:46	
5	08:01	07:40	08:01 (57)	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:30 (57)	16:45		
	17:00	17:39	21	08:22 (57)	18:16	19:55	20:32	21:04	21:13	20:47	19:57	17:10	22	07:52 (57)	16:46	
6	08:01	07:38	08:00 (57)	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:31 (57)	16:46		
	17:01	17:41	22	08:22 (57)	18:18	19:57	20:33	21:05	21:12	20:46	19:55	17:09	20	07:51 (57)	16:46	
7	08:01	07:37	07:59 (57)	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:33 (57)	16:47		
	17:02	17:42	23	08:22 (57)	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	19	07:52 (57)	16:46
8	08:01	07:36	07:57 (57)	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:34 (57)	16:48		
	17:03	17:43	25	08:22 (57)	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	17	07:51 (57)	16:46
9	08:01	07:34	07:57 (57)	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:36 (57)	16:49		
	17:04	17:45	25	08:22 (57)	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	15	07:51 (57)	16:46
10	08:00	07:33	07:57 (57)	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:37 (57)	16:50		
	17:05	17:46	24	08:21 (57)	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	13	07:50 (57)	16:46
11	08:00	07:32	07:58 (57)	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:39 (57)	16:51		
	17:06	17:48	23	08:21 (57)	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	11	07:50 (57)	16:46
12	08:00	07:30	08:00 (57)	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:40 (57)	16:51		
	17:07	17:49	20	08:20 (57)	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	9	07:49 (57)	16:46
13	07:59	07:29	08:00 (57)	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:41 (57)	16:52		
	17:09	17:50	18	08:18 (57)	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	6	07:47 (57)	16:46
14	07:59	07:27	08:02 (57)	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:43 (57)	16:53		
	17:10	17:52	15	08:17 (57)	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	3	07:46 (57)	16:46
15	07:58	07:26	08:04 (57)	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:50 (57)	16:54		
	17:11	17:53	10	08:14 (57)	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59		16:46	
16	07:58	07:25		07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:52 (57)	16:55		
	17:12	17:55		19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58		16:46		
17	07:57	07:23		07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:52 (57)	16:55		
	17:13	17:56		19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57		16:47		
18	07:57	07:22		07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:52 (57)	16:56		
	17:15	17:57		19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56		16:47		
19	07:56	07:20		07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:52 (57)	16:57		
	17:16	17:59		19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55		16:47		
20	07:55	07:18		07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:52 (57)	16:57		
	17:17	18:00		19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54		16:48		
21	07:55	07:17		07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:52 (57)	16:58		
	17:19	18:00		19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53		16:48		
22	07:54	07:15		07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:52 (57)	16:58		
	17:20	18:02		19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52		16:49		
23	07:53	07:14		07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59 (57)	16:59		
	17:21	18:03		19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52		16:49		
24	07:52	07:12		07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59 (57)	16:59		
	17:23	18:04		19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51		16:50		
25	07:51	07:10		07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00 (57)	16:50		
	17:24	18:06		19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50		16:50		
26	07:50	07:09		07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00 (57)	16:50		
	17:25	18:07		19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50		16:51		
27	07:49	07:07		07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55		08:33 (57)	16:50		
	17:27	18:08		19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	12	08:45 (57)	16:49		
28	07:48	08:11 (57)	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	08:31 (57)	16:49	16:52		
	17:28	3	08:14 (57)	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	15	08:46 (57)	16:49	
29	07:47	08:10 (57)		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	08:30 (57)	16:49	16:52		
	17:29	6	08:16 (57)		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	18	08:48 (57)	16:48	
30	07:46	08:08 (57)		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	08:28 (57)	16:48	16:53		
	17:31	9	08:17 (57)		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	21	08:49 (57)	16:48	
31	07:45	08:07 (57)		07:09	05:45	05:45	06:10	06:46	07:22	08:00	08:28 (57)	16:48		16:54		
	17:32	11	08:18 (57)		19:49	21:00	21:00	20:53	20:06	18:17	22	08:50 (57)		16:55		
Potential sun hours	288		292		369	403	458	464	470	435	377	341	289		276	
Total, worst case	29		290									88		232		
Sun reduction	0.57		0.59									0.63		0.50		
Oper. time red.	0.98		0.98									0.98		0.98		
Wind dir. red.	0.67		0.67									0.67		0.67		
Total reduction	0.37		0.39									0.41		0.33		
Total, real	11		112									36		76		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H115 - H115

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H116 - H116

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:01 16:56 39	08:26 (58) 09:12 (57) 17:34	07:44 17:34 18:11	07:04 18:11 19:50	07:07 20:27 21:01	06:17 21:01 21:13	05:44 21:13 20:52	06:11 20:52 20:04	06:47 20:04 19:09	07:22 19:09 17:15	07:01 17:15 16:47	07:40 16:47 16:44	08:06 (58) 08:56 (57) 44	
2	08:01 16:57 40	08:26 (58) 09:12 (57) 17:35	07:43 17:35 18:12	07:02 18:12 19:52	07:06 20:28 21:02	06:15 21:02 21:13	05:44 21:13 20:51	06:12 20:51 20:03	06:48 20:03 19:07	07:23 17:14 16:47	07:03 17:14 16:47	07:41 16:47 16:44	08:07 (58) 08:57 (57) 45	
3	08:01 16:58 41	08:26 (58) 09:13 (57) 17:36	07:42 17:36 18:14	07:00 18:14 19:53	07:04 20:30 21:03	06:14 21:03 21:13	05:43 21:13 20:50	06:13 20:50 20:01	06:49 20:01 19:05	07:24 17:13 16:47	07:04 17:13 16:47	07:41 16:47 16:44	08:08 (58) 08:57 (57) 44	
4	08:01 16:59 42	08:26 (58) 09:13 (57) 17:38	07:41 17:38 18:15	06:58 18:15 19:54	07:02 20:31 21:04	06:13 21:04 21:13	05:43 21:13 20:48	06:15 20:48 19:59	06:50 19:03 17:11	07:26 17:11 16:46	07:05 17:11 16:46	07:42 16:46 16:44	08:09 (58) 08:58 (57) 44	
5	08:01 17:00 43	08:25 (58) 09:13 (57) 17:39	07:40 17:39 18:16	06:57 18:16 19:55	07:00 20:32 21:04	06:11 21:04 21:13	05:42 21:13 20:47	06:16 20:47 19:57	06:52 19:02 17:10	07:27 17:10 16:46	07:07 17:10 16:46	07:43 16:46 16:44	08:10 (58) 08:58 (57) 43	
6	08:01 17:01 43	08:25 (58) 09:13 (57) 17:41	07:38 17:41 18:18	06:55 18:18 19:57	06:58 20:33 21:05	06:10 21:05 21:12	05:42 21:12 20:46	06:17 20:46 19:55	06:53 19:00 17:09	07:28 17:09 16:46	07:08 17:09 16:46	07:44 16:46 16:44	08:11 (58) 08:59 (57) 43	
7	08:01 17:02 43	08:25 (58) 09:13 (57) 17:42	07:37 17:42 18:19	06:53 18:19 19:58	06:57 20:34 21:06	06:08 21:06 21:12	05:41 21:12 20:44	06:18 20:44 19:54	06:54 17:29 16:46	07:29 17:07 16:46	07:10 17:07 16:46	07:47 16:46 16:44	08:12 (58) 09:00 (57) 43	
8	08:01 17:03 44	08:25 (58) 09:14 (57) 17:43	07:36 17:43 18:20	06:51 18:20 19:59	06:07 20:36 21:06	05:49 21:06 21:12	05:49 21:12 20:43	06:19 19:52 18:54	06:55 17:31 16:46	07:31 17:06 16:46	07:11 17:06 16:46	07:48 16:46 16:44	08:13 (58) 09:00 (57) 41	
9	08:01 17:04 44	08:24 (58) 09:13 (57) 17:45	07:34 17:45 19:21	06:50 19:21 20:00	06:06 20:37 21:07	05:41 21:07 21:11	05:49 21:11 20:42	06:20 19:50 18:53	06:56 17:32 16:46	07:32 17:05 16:46	07:12 17:05 16:46	07:49 16:46 16:44	08:14 (58) 09:01 (57) 41	
10	08:00 17:05 45	08:24 (58) 09:14 (57) 17:46	07:33 17:46 19:23	06:48 19:23 20:01	06:05 20:38 21:08	05:41 21:08 21:11	05:50 21:11 20:40	06:21 19:48 18:51	06:57 17:33 16:46	07:33 17:14 16:46	07:14 17:04 16:46	07:50 16:46 16:44	08:15 (58) 09:01 (57) 40	
11	08:00 17:06 45	08:24 (58) 09:14 (57) 17:48	07:32 17:48 19:24	06:49 19:24 20:03	06:03 20:39 21:08	05:40 21:08 21:10	05:51 21:10 20:39	06:23 19:46 18:49	06:59 17:33 16:46	07:34 17:03 16:46	07:15 17:03 16:46	07:51 16:46 16:44	08:16 (58) 09:02 (57) 39	
12	08:00 17:07 44	08:23 (58) 09:13 (57) 17:49	07:30 17:49 19:25	06:48 19:25 20:04	06:02 20:40 21:09	05:40 21:09 21:10	05:52 21:10 20:37	06:24 19:44 18:47	07:00 17:02 16:46	07:35 17:02 16:46	07:16 17:02 16:46	07:51 16:46 16:44	08:17 (58) 09:03 (57) 40	
13	07:59 17:08 45	08:23 (58) 09:14 (57) 17:50	07:29 17:50 19:27	06:46 19:27 20:05	06:01 20:42 21:10	05:40 21:10 21:09	05:52 21:09 20:36	06:27 19:43 18:46	07:01 17:01 16:46	07:37 17:01 16:46	07:18 17:01 16:46	07:52 16:46 16:44	08:18 (58) 09:03 (57) 38	
14	07:59 17:10 44	08:22 (58) 09:13 (57) 17:52	07:27 17:52 19:28	06:44 19:28 20:06	06:00 20:43 21:10	05:40 21:10 21:09	05:53 21:09 20:34	06:26 19:41 18:44	07:02 17:00 16:46	07:38 17:00 16:46	07:19 17:00 16:46	07:53 16:46 16:44	08:18 (58) 09:03 (57) 38	
15	07:58 17:11 43	08:21 (58) 09:12 (57) 17:53	07:26 17:53 19:29	06:43 19:29 20:08	05:49 20:44 21:11	05:40 21:11 21:08	05:54 21:08 20:33	06:27 19:39 18:42	07:03 17:00 16:46	07:39 16:46 16:44	07:20 16:46 16:44	08:03 (58) 08:07 (58) 16:46	07:54 16:46 16:44	08:19 (58) 09:04 (57) 37
16	07:58 17:12 43	08:21 (58) 09:12 (57) 17:55	07:25 17:55 19:30	06:41 19:30 20:09	05:57 20:45 21:11	05:40 21:11 21:07	05:55 21:07 20:31	06:28 19:37 18:40	07:04 17:00 16:46	07:41 16:46 16:44	07:22 16:46 16:44	08:07 (58) 08:11 (58) 16:46	07:55 16:46 16:44	08:20 (58) 09:05 (57) 37
17	07:57 17:13 42	08:20 (58) 09:11 (57) 17:56	07:23 17:56 19:32	06:39 19:32 20:10	05:56 20:46 21:11	05:40 21:11 21:07	05:56 21:07 20:30	06:30 19:35 18:39	07:06 17:00 16:46	07:42 16:46 16:44	07:23 16:46 16:44	08:00 (58) 08:12 (58) 16:47	07:55 16:47 16:44	08:21 (58) 09:06 (57) 37
18	07:57 17:15 39	08:19 (58) 09:09 (57) 17:57	07:21 17:57 19:33	06:37 19:33 20:11	05:55 20:47 21:12	05:40 21:12 21:06	05:57 21:06 20:28	06:31 19:33 18:37	07:07 17:00 16:46	07:43 16:46 16:44	07:24 16:46 16:44	08:14 (58) 08:14 (58) 16:47	07:56 16:47 16:44	08:21 (58) 09:05 (57) 36
19	07:56 17:16 35	08:20 (58) 09:09 (57) 17:59	07:20 17:59 19:34	06:31 19:34 20:13	06:36 20:48 21:12	05:54 21:12 21:05	05:58 21:05 20:27	06:32 19:31 18:35	07:08 17:00 16:46	07:44 16:46 16:44	07:26 16:46 16:44	08:15 (58) 08:15 (58) 16:47	07:57 16:47 16:44	08:22 (58) 09:06 (57) 36
20	07:55 17:17 30	08:20 (58) 09:06 (57) 18:00	07:18 18:00 19:35	06:30 19:35 20:14	06:34 20:14 20:49	05:53 21:12 21:04	05:59 21:04 20:25	06:33 19:29 18:34	07:09 17:00 16:46	07:46 16:46 16:44	07:27 16:46 16:44	08:16 (58) 08:16 (58) 16:48	07:57 16:48 16:44	08:31 (57) 09:06 (57) 35
21	07:55 17:19 20	08:21 (58) 09:07 (57) 18:00	07:17 18:00 19:37	06:28 19:37 20:15	06:32 20:15 20:50	05:52 21:13 21:03	06:00 21:03 20:23	06:34 19:28 18:32	07:10 17:00 16:46	07:47 16:46 16:44	07:28 16:46 16:44	08:17 (58) 08:17 (58) 16:48	07:58 16:48 16:44	08:32 (57) 09:07 (57) 35
22	07:54 17:20 19	08:21 (58) 09:08 (58) 18:02	07:15 18:02 19:38	06:26 19:38 20:16	06:31 20:16 20:51	05:52 21:13 21:03	06:01 21:03 20:22	06:35 18:30 17:36	07:11 16:46 16:44	07:48 16:46 16:44	07:29 16:46 16:44	08:18 (58) 08:22 (58) 16:49	07:58 16:49 16:44	08:32 (57) 09:07 (57) 35
23	07:53 17:21 18	08:22 (58) 09:08 (58) 18:03	07:14 18:03 19:39	06:24 19:39 20:17	06:29 20:17 20:52	05:51 21:13 21:02	06:02 21:02 20:20	06:36 19:24 18:29	07:13 17:00 16:46	07:50 16:46 16:44	07:31 16:46 16:44	08:45 (57) 08:45 (57) 16:49	07:59 16:49 16:44	08:33 (57) 09:08 (57) 35
24	07:52 17:23 16	08:24 (58) 09:09 (57) 18:04	07:12 18:04 19:40	06:22 19:40 20:19	06:28 20:19 20:54	05:50 21:13 21:01	06:03 21:01 20:18	06:38 19:22 18:27	07:14 17:00 16:46	07:51 16:46 16:44	07:32 16:46 16:44	08:47 (57) 08:47 (57) 16:50	07:59 16:50 16:46	08:33 (57) 09:08 (57) 35
25	07:51 17:24 13	08:26 (58) 09:09 (57) 18:06	07:10 18:06 19:42	06:20 19:42 20:20	06:26 20:20 20:55	05:49 21:13 21:00	05:42 21:00 20:17	06:04 19:20 18:26	06:39 17:00 16:46	07:15 16:46 16:44	07:52 16:46 16:44	08:54 (57) 08:49 (57) 16:50	07:52 16:50 16:46	08:25 (58) 09:09 (57) 36
26	07:50 17:25 10	08:28 (58) 09:08 (58) 18:07	07:09 18:07 19:43	06:09 19:43 20:21	06:24 20:21 20:55	05:48 21:14 21:04	05:42 21:04 20:15	06:05 19:18 18:24	06:40 17:00 16:46	07:16 16:46 16:44	07:53 16:46 16:44	08:50 (57) 08:50 (57) 16:51	07:53 16:51 16:46	08:25 (58) 09:10 (57) 37
27	07:49 17:27 4	08:31 (58) 08:35 (58) 18:08	07:07 18:08 19:44	06:23 19:44 20:22	06:23 20:22 20:56	05:47 21:14 20:58	05:42 21:14 20:58	06:06 19:16 18:23	06:41 17:00 16:46	07:17 16:46 16:44	07:55 16:46 16:44	08:01 (58) 08:52 (57) 16:52	07:36 16:52 16:46	08:25 (58) 09:10 (57) 38
28	07:48 17:28 29	07:05 18:10 19:45	07:15 19:45 20:24	06:21 19:45 20:24	06:21 20:24 20:57	05:47 21:14 20:57	05:43 21:14 20:57	06:42 19:14 18:21	07:18 17:00 16:46	07:56 16:46 16:44	07:37 16:46 16:44	08:02 (58) 08:53 (57) 16:52	08:01 16:52 16:46	08:25 (58) 09:10 (57) 37
29	07:47 17:29 30	07:13 19:47 20:25	06:20 19:47 20:58	06:20 20:25 20:58	06:20 20:58 21:14	05:43 21:14 20:56	06:08 21:14 20:56	06:43 19:13 18:20	07:20 17:00 16:46	07:57 16:46 16:44	07:38 16:46 16:44	08:03 (58) 08:54 (57) 16:53	08:01 16:53 16:46	08:26 (58) 09:11 (57) 38
30	07:46 17:31 31	07:11 19:48 20:26	06:18 19:48 20:59	06:18 20:26 20:59	06:18 20:59 21:14	05:44 21:14 20:54	06:09 20:54 20:08	06:45 19:11 18:18	07:21 17:00 16:46	07:59 16:46 16:44	07:39 16:46 16:44	08:04 (58) 08:54 (57) 16:54	08:01 16:54 16:46	08:26 (58) 09:11 (57) 38
31	07:45 17:32	07:09 19:49	06:17 19:49	06:17 19:49	06:17 21:00	06:10 21:00	06:46 20:53	07:00 20						

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H117 - H117

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:24	20:57	21:13	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H118 - H118

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01 16:56	07:44 17:34	07:03 18:11	07:24 (59) 17:49 (58)	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	41 07:47 (60) 17:15	07:01 16:47
2	08:01 16:57	07:43 17:35	07:02 18:12	07:22 (59) 17:50 (58)	07:06 19:52	06:15 20:28	05:44 21:02	05:45 21:13	06:12 20:51	06:48 20:03	07:23 19:07	54 07:45 (60) 17:14	07:41 16:47
3	08:01 16:58	07:42 17:36	07:00 18:13	07:21 (59) 17:52 (58)	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:49	06:49 20:01	07:24 19:05	60 07:45 (60) 17:13	07:42 16:47
4	08:01 16:59	07:41 17:38	06:58 18:15	07:19 (59) 17:51 (58)	07:02 19:54	06:12 20:31	05:43 21:03	05:46 21:13	06:15 20:48	06:50 19:59	07:26 19:03	64 07:47 (60) 17:11	07:44 16:46
5	08:01 17:00	07:39 17:39	06:57 18:16	07:17 (58) 17:50 (58)	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:16 20:47	06:52 19:57	07:27 19:01	66 07:48 (60) 17:10	07:45 16:46
6	08:01 17:01	07:38 17:41	06:55 18:17	07:15 (60) 17:49 (58)	06:58 19:56	06:10 20:33	05:42 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	67 07:49 (60) 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	07:13 (60) 17:48 (58)	06:57 19:58	06:08 20:34	05:41 21:06	05:48 21:12	06:18 20:44	06:54 19:54	07:29 18:56	68 07:50 (60) 17:07	07:47 16:46
8	08:01 17:03	07:36 17:43	07:51 18:20	08:12 (60) 18:48 (58)	06:55 19:59	06:07 20:36	05:41 21:06	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	69 07:52 (60) 17:06	07:48 16:46
9	08:00 17:04	07:34 17:45	07:50 19:21	08:10 (60) 18:46 (58)	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	68 07:53 (59) 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	07:48 19:23	08:08 (60) 18:44 (58)	06:51 20:01	06:04 20:38	05:41 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	68 07:54 (59) 17:04	07:50 16:45
11	08:00 17:06	07:32 17:48	07:46 19:24	08:06 (60) 18:40 (58)	06:49 20:03	06:03 20:39	05:40 21:08	05:51 21:10	06:23 20:39	06:58 19:46	07:34 18:49	65 07:55 (59) 17:03	07:51 16:45
12	08:00 17:07	07:30 17:49	07:44 19:25	08:06 (60) 08:49 (59)	06:48 20:04	06:02 20:40	05:40 21:09	05:52 21:10	06:24 20:37	07:00 19:44	07:35 18:47	62 07:57 (59) 17:02	07:52 16:46
13	07:59 17:08	07:29 17:50	07:42 19:27	08:09 (60) 08:48 (59)	06:46 20:05	06:01 20:41	05:40 21:09	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45	62 07:58 (59) 17:00	07:52 16:46
14	07:59 17:10	07:27 17:52	07:40 19:28	08:23 (59) 08:45 (59)	06:44 20:06	06:00 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	55 08:01 (59) 17:00	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	08:26 (59) 08:42 (59)	06:42 20:08	05:59 20:44	05:40 21:10	05:54 21:08	06:27 20:33	07:03 19:39	10 18:57 (57) 17:42	51 08:19 (58) 16:58	07:54 16:46
16	07:58 17:12	07:24 17:55	07:37 19:30	08:30 (59) 08:37 (59)	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	14 18:59 (57) 17:40	47 08:17 (58) 16:57	07:54 16:46
17	07:57 17:13	07:23 17:56	07:35 19:32	09:09 (57) 19:10 (57)	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:06	06:29 20:30	07:05 19:35	17 18:54 (57) 17:42	42 08:03 (59) 16:56	07:55 16:46
18	07:56 17:15	07:21 17:57	07:33 19:33	19:07 (57) 19:11 (57)	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:31 20:28	07:07 19:33	17 18:52 (57) 17:40	35 08:05 (59) 16:56	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	19:06 (57) 19:12 (57)	06:36 20:12	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:26	07:08 19:31	16 18:51 (57) 17:44	29 08:07 (59) 16:55	07:56 16:47
20	07:55 17:17	07:18 18:00	7 07:39 (59) 17:36 (58)	19:06 (57) 19:15 (57)	06:34 20:14	05:53 20:49	05:40 21:12	05:59 21:04	06:33 20:25	07:09 19:29	15 18:50 (57) 17:46	22 08:09 (59) 16:54	07:57 16:48
21	07:54 17:18	07:17 18:00	17 07:38 (59) 17:38 (58)	19:05 (57) 19:16 (57)	06:32 20:15	05:52 20:50	05:40 21:13	06:00 21:03	06:34 20:23	07:10 19:27	14 18:49 (57) 17:40	15 08:09 (59) 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	25 07:36 (59) 17:39 (58)	19:04 (57) 19:17 (57)	06:31 20:16	05:51 20:51	05:41 21:13	06:01 21:02	06:35 20:22	07:11 19:26	14 18:49 (57) 17:42	3 18:03 (58) 16:52	07:58 16:49
23	07:53 17:21	07:13 18:03	31 07:34 (59) 17:40 (58)	19:04 (57) 19:18 (57)	06:29 20:17	05:51 20:52	05:41 21:13	06:02 21:02	06:36 20:20	07:12 19:24	9 18:49 (57) 17:49	9 18:58 (57) 17:29	07:59 16:49
24	07:52 17:23	07:12 18:04	38 07:33 (59) 17:43 (58)	19:04 (57) 19:19 (57)	06:27 20:19	05:50 20:53	05:41 21:13	06:03 21:01	06:38 20:18	07:14 19:22	7 18:50 (57) 17:52	7 18:57 (57) 17:27	07:59 16:50
25	07:51 17:24	07:10 18:05	43 07:31 (59) 17:44 (58)	19:04 (57) 19:20 (57)	06:26 20:20	05:49 20:54	05:41 21:13	06:04 21:00	06:39 20:17	07:15 19:20	5 18:50 (57) 17:26	5 18:55 (57) 17:26	07:59 16:50
26	07:50 17:25	07:09 18:07	48 07:29 (59) 17:45 (58)	19:04 (57) 19:21 (57)	06:24 20:21	05:48 20:55	05:42 21:13	06:05 20:59	06:40 20:15	07:16 19:18	2 18:51 (57) 17:24	2 18:53 (57) 17:24	08:00 16:50
27	07:49 17:27	07:07 18:08	52 07:28 (59) 17:47 (58)	19:06 (57) 19:21 (57)	06:23 20:22	05:47 20:56	05:42 21:13	06:06 20:58	06:41 20:13	07:17 19:16	18:23 08:07 (59) 17:56	18:23 08:21 (59) 17:21	08:00 16:49
28	07:48 17:28	07:05 18:10	56 07:26 (59) 17:48 (58)	19:07 (57) 19:19 (57)	06:21 20:23	05:47 20:57	05:43 21:13	06:07 20:57	06:42 20:11	07:18 19:14	14 08:04 (59) 17:57	14 08:21 (59) 17:21	08:00 16:49
29	07:47 17:29	07:47 18:10	56 17:48 (58)	19:15 (57) 19:12 (57)	06:20 20:23	05:46 20:57	05:43 21:13	06:07 20:57	06:43 20:10	07:20 19:13	20 08:04 (59) 17:59	20 08:24 (59) 17:20	08:01 16:48
30	07:46 17:31	07:46 18:10	56 17:48 (58)	19:15 (57) 19:13 (57)	06:20 20:25	05:46 20:58	05:44 21:13	06:09 20:55	06:45 20:10	07:21 19:13	20 07:50 (60) 17:59	20 08:24 (59) 17:20	08:01 16:48
31	07:45 17:32	07:45 18:10	56 17:48 (58)	19:15 (57) 19:13 (57)	06:20 20:25	05:46 20:58	05:44 21:13	06:09 20:55	06:45 20:10	07:21 19:13	20 07:50 (60) 17:59	20 08:24 (59) 17:20	08:01 16:48
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case		317	974						204	1109			
Sun reduction		0.59	0.59						0.69	0.63			
Oper. time red.		0.98	0.98						0.98	0.98			
Wind dir. red.		0.58	0.59						0.60	0.59			
Total reduction		0.34	0.34						0.40	0.36			
Total, real		107	334						82	403			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H119 - H119

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H147 - H147

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	06:17 20:27	19:48 (55) 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47	
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	19:47 (55) 20:05 (55)	05:43 21:02	05:44 21:13	06:12 20:51	20:06 (55) 20:02 (55)	06:48 20:02	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:29	19:48 (55) 20:06 (55)	05:43 21:03	05:45 21:13	06:13 20:49	20:02 (55) 20:12 (55)	06:49 20:01	07:24 19:05	07:04 17:12	07:42 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	19:47 (55) 20:07 (55)	05:42 21:03	05:46 21:13	06:14 20:48	20:02 (55) 20:15 (55)	06:50 19:59	07:25 19:03	07:05 17:11	07:43 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	06:11 20:32	19:48 (55) 20:08 (55)	05:42 21:04	05:46 21:12	06:15 20:47	20:00 (55) 20:16 (55)	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:10 20:33	19:49 (55) 20:08 (55)	05:42 21:05	05:47 21:12	06:17 20:46	19:59 (55) 20:17 (55)	06:53 19:55	07:28 18:58	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	19:49 (55) 20:06 (55)	05:41 21:06	05:48 21:12	06:18 20:44	19:58 (55) 20:18 (55)	06:54 19:53	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:55 19:59	06:07 20:35	19:50 (55) 20:05 (55)	05:41 21:06	05:48 21:11	06:19 20:43	19:57 (55) 20:17 (55)	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:00 17:04	07:34 17:45	07:49 19:21	06:53 20:00	06:06 20:37	19:52 (55) 20:04 (55)	05:41 21:07	05:49 21:11	06:20 20:41	19:57 (55) 20:16 (55)	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38	19:54 (55) 20:02 (55)	05:40 21:08	05:50 21:11	06:21 20:40	19:56 (55) 20:14 (55)	06:57 19:48	07:33 18:51	07:13 17:04	07:49 16:45
11	08:00 17:06	07:31 17:47	07:46 19:24	06:49 20:02	06:03 20:39	20:02 (55) 21:08	05:40 21:10	05:51 21:10	06:22 20:39	19:56 (55) 20:13 (55)	06:58 19:46	07:34 18:49	07:15 17:02	07:50 16:45
12	07:59 17:07	07:30 17:49	07:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	17 16	20:13 (55) 20:11 (55)	19:46 19:44	18:49 18:47	17:02 17:01	16:45 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:01 20:41	05:40 21:09	05:52 21:09	06:25 20:36	16 15	19:55 (55) 20:10 (55)	07:01 19:42	18:47 18:45	17:01 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:42	05:40 21:10	05:53 21:08	06:26 20:34	15 13	19:55 (55) 20:08 (55)	07:02 19:40	18:38 18:44	17:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:07	05:58 20:44	05:40 21:10	05:54 21:08	06:27 20:33	12 12	19:56 (55) 20:08 (55)	07:03 19:39	18:42 18:42	17:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	9	19:57 (55) 20:06 (55)	07:05 19:37	18:40 18:40	17:21 16:57	07:54 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:06	06:29 20:30	8	19:57 (55) 20:05 (55)	07:05 19:35	18:38 18:38	17:23 16:56	07:55 16:46
18	07:56 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:30 20:28	5	19:58 (55) 20:03 (55)	07:06 19:33	18:37 18:37	17:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:26	1	20:00 (55) 20:01 (55)	07:08 19:31	18:35 18:35	17:25 16:55	07:56 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25		20:01 (55) 20:02 (55)	07:09 19:29	18:33 18:33	17:27 16:54	07:57 16:47
21	07:54 17:18	07:17 18:00	07:28 19:36	06:32 20:15	05:52 20:50	05:40 21:12	05:59 21:03	06:34 20:23		20:01 (55) 20:02 (55)	07:10 19:27	18:32 18:32	17:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	05:51 20:51	05:40 21:13	06:00 21:02	06:35 20:21		20:01 (55) 20:02 (55)	07:11 19:25	18:32 18:30	17:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:03	07:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:01 21:01	06:36 20:20		20:02 (55) 20:03 (55)	07:12 19:24	18:30 18:29	17:30 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:18	05:49 20:53	19:54 (55) 19:56 (55)	05:49 20:53	06:37 20:18		20:03 (55) 20:04 (55)	07:13 19:22	18:29 18:27	17:32 16:51	07:59 16:49
25	07:51 17:24	07:10 18:05	07:20 19:41	06:26 20:20	05:49 20:54	19:51 (55) 19:56 (55)	05:49 20:54	06:39 20:16		20:04 (55) 20:05 (55)	07:15 19:20	18:27 18:25	17:33 16:50	07:59 16:50
26	07:50 17:25	07:08 18:07	07:18 19:43	06:24 20:21	05:48 20:55	19:51 (55) 19:58 (55)	05:48 20:55	06:40 20:15		20:05 (55) 20:06 (55)	07:16 19:18	18:25 18:24	17:34 16:49	08:00 16:51
27	07:49 17:26	07:07 18:08	07:16 19:44	06:23 20:22	05:47 20:56	19:49 (55) 19:59 (55)	05:47 20:56	06:41 20:13		20:06 (55) 20:07 (55)	07:17 19:16	18:24 18:22	17:35 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:23	05:46 20:57	19:49 (55) 20:00 (55)	05:46 20:57	06:42 20:11		20:08 (55) 20:09 (55)	07:18 19:14	18:22 18:21	17:37 16:48	08:00 16:52
29	07:47 17:29		07:13 19:46	06:20 20:25	05:46 20:58	19:48 (55) 20:01 (55)	05:46 20:58	06:43 20:10		20:10 (55) 20:11 (55)	07:19 19:12	18:21 18:19	17:38 16:48	08:01 16:53
30	07:46 17:31		07:11 19:48	06:18 20:26	05:45 20:59	19:48 (55) 20:03 (55)	05:45 20:59	06:44 20:08		20:11 (55) 20:12 (55)	07:21 19:11	18:19 18:18	17:39 16:47	08:01 16:54
31	07:45 17:32		07:09 19:49	05:44 21:00	05:44 21:00		05:44 21:00	06:46 20:06		20:13 (55) 20:14 (55)	08:00 18:17		08:01 16:54	
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276		
Total, worst case				63	163			233						
Sun reduction				0.61	0.65			0.74						
Oper. time red.				0.98	0.98			0.98						
Wind dir. red.				0.63	0.63			0.63						
Total reduction				0.37	0.40			0.45						
Total, real				24	65			106						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H148 - H148

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:01	07:44	07:03	07:07	18:42 (55)	06:17	05:44	05:44	06:11	06:47	18:49 (55)	07:22	07:01	07:40		
	16:56	17:33	18:11	19:50	42	19:24 (55)	20:27	21:01	21:13	20:52	20:04	20	19:09 (55)	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	18:42 (55)	06:15	05:43	05:44	06:12	06:48	18:47 (55)	07:23	07:03	07:41		
	16:56	17:35	18:12	19:51	41	19:23 (55)	20:28	21:02	21:13	20:51	20:02	25	19:12 (55)	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	18:43 (55)	06:14	05:43	05:45	06:13	06:49	18:45 (55)	07:24	07:04	07:42		
	16:57	17:36	18:13	19:53	40	19:23 (55)	20:29	21:03	21:13	20:49	20:01	28	19:13 (55)	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	18:43 (55)	06:12	05:42	05:46	06:14	06:50	18:43 (55)	07:25	07:05	07:43		
	16:58	17:38	18:15	19:54	39	19:22 (55)	20:31	21:03	21:13	20:48	19:59	31	19:14 (55)	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	18:43 (55)	06:11	05:42	05:46	06:15	06:51	18:41 (55)	07:27	07:07	07:45		
	16:59	17:39	18:16	19:55	38	19:21 (55)	20:32	21:04	21:12	20:47	19:57	34	19:15 (55)	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	18:43 (55)	06:10	05:42	05:47	06:17	06:53	18:40 (55)	07:28	07:08	07:46		
	17:00	17:40	18:17	19:56	36	19:19 (55)	20:33	21:05	21:12	20:46	19:55	35	19:15 (55)	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	18:44 (55)	06:08	05:41	05:48	06:18	06:54	18:38 (55)	07:29	07:09	07:47		
	17:01	17:42	18:19	19:58	34	19:18 (55)	20:34	21:06	21:12	20:44	19:53	38	19:16 (55)	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	18:46 (55)	06:07	05:41	05:48	06:19	06:55	18:37 (55)	07:30	07:11	07:48		
	17:03	17:43	18:20	19:59	31	19:17 (55)	20:35	21:06	21:11	20:43	19:52	39	19:16 (55)	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	18:47 (55)	06:06	05:41	05:49	06:20	06:56	18:36 (55)	07:32	07:12	07:49		
	17:04	17:45	18:21	20:00	28	19:15 (55)	20:37	21:07	21:11	20:41	19:50	40	19:16 (55)	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	18:48 (55)	06:04	05:40	05:50	06:21	06:57	18:36 (55)	07:33	07:13	07:49		
	17:05	17:46	18:23	20:01	25	19:13 (55)	20:38	21:08	21:11	20:40	19:48	41	19:17 (55)	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	18:50 (55)	06:03	05:40	05:51	06:22	06:58	18:35 (55)	07:34	07:15	07:50		
	17:06	17:47	18:24	20:03	20	19:10 (55)	20:39	21:08	21:10	20:39	19:46	42	19:17 (55)	18:49	17:02	16:45
12	07:59	07:30	07:44	06:48	18:54 (55)	06:02	05:40	05:51	06:23	06:59	18:34 (55)	07:35	07:16	07:51		
	17:07	17:49	18:25	20:04	13	19:07 (55)	20:40	21:09	21:10	20:37	19:44	43	19:17 (55)	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	19:07 (55)	06:01	05:40	05:52	06:25	07:01	18:33 (55)	07:37	07:17	07:52		
	17:08	17:50	18:26	20:05	20:41	21:09	21:09	21:09	20:36	19:42	44	19:17 (55)	18:45	17:00	16:45	
14	07:59	07:27	07:40	06:44	19:07 (55)	05:59	05:40	05:53	06:26	07:02	18:33 (55)	07:38	07:19	07:53		
	17:09	17:52	18:28	20:06	20:42	21:10	21:08	21:08	20:34	19:40	43	19:16 (55)	18:44	16:59	16:46	
15	07:58	07:26	07:39	06:42	19:07 (55)	05:58	05:40	05:54	06:27	07:03	18:32 (55)	07:39	07:20	07:54		
	17:11	17:53	18:29	20:07	20:44	21:10	21:08	21:08	20:33	19:39	42	19:14 (55)	18:42	16:58	16:46	
16	07:58	07:24	07:37	6	19:03 (55)	06:41	05:57	05:40	05:55	06:28	07:04	18:32 (55)	07:40	07:21	07:54	
	17:12	17:54	18:30	19:09 (55)	20:09	20:45	21:11	21:07	20:31	19:37	40	19:12 (55)	18:40	16:57	16:46	
17	07:57	07:23	07:35	18:58 (55)	06:39	05:56	05:40	05:56	06:29	07:05	18:32 (55)	07:42	07:23	07:55		
	17:13	17:56	18:31	12	19:10 (55)	20:10	20:46	21:11	21:06	20:30	19:35	38	19:10 (55)	18:38	16:56	16:46
18	07:56	07:21	07:33	18:55 (55)	06:37	05:55	05:40	05:57	06:30	07:06	18:33 (55)	07:43	07:24	07:56		
	17:14	17:57	18:33	16	19:11 (55)	20:11	20:47	21:12	21:06	20:28	19:33	36	19:09 (55)	18:37	16:55	16:47
19	07:56	07:20	07:31	18:53 (55)	06:35	05:54	05:40	05:58	06:32	07:08	18:33 (55)	07:44	07:25	07:56		
	17:16	17:59	18:34	19	19:12 (55)	20:12	20:48	21:12	21:05	20:26	19:31	34	19:07 (55)	18:35	16:55	16:47
20	07:55	07:18	07:29	18:51 (55)	06:34	05:53	05:40	05:58	06:33	07:09	18:33 (55)	07:45	07:27	07:57		
	17:17	18:00	18:35	24	19:15 (55)	20:14	20:49	21:12	21:04	20:25	19:29	32	19:05 (55)	18:33	16:54	16:47
21	07:54	07:17	07:28	18:50 (55)	06:32	05:52	05:40	05:59	06:34	07:10	18:33 (55)	07:47	07:28	07:58		
	17:18	18:00	18:37	26	19:16 (55)	20:15	20:50	21:13	21:03	20:23	19:27	30	19:03 (55)	18:32	16:53	16:48
22	07:54	07:15	07:26	18:48 (55)	06:31	05:51	05:40	06:00	06:35	07:11	18:34 (55)	07:48	07:29	07:58		
	17:20	18:01	18:38	29	19:17 (55)	20:16	20:51	21:13	21:02	20:21	19:25	27	19:01 (55)	18:30	16:52	16:48
23	07:53	07:13	07:24	18:47 (55)	06:29	05:50	05:41	06:01	06:36	07:12	18:34 (55)	07:49	07:31	07:59		
	17:21	18:03	18:39	31	19:18 (55)	20:17	20:52	21:13	21:01	20:20	19:24	24	18:58 (55)	18:29	16:51	16:49
24	07:52	07:12	07:22	18:46 (55)	06:27	05:49	05:41	06:02	06:37	07:13	18:35 (55)	07:51	07:32	07:59		
	17:22	18:04	18:40	33	19:19 (55)	20:19	20:53	21:13	21:01	20:18	19:22	21	18:56 (55)	18:27	16:51	16:49
25	07:51	07:10	07:20	18:44 (55)	06:26	05:49	05:41	06:04	06:39	07:15	18:38 (55)	07:52	07:33	07:59		
	17:24	18:05	18:41	36	19:20 (55)	20:20	20:54	21:13	21:00	20:16	19:20	17	18:55 (55)	18:25	16:50	16:50
26	07:50	07:08	07:18	18:44 (55)	06:24	05:48	05:42	06:05	06:40	07:16	18:40 (55)	07:53	07:34	08:00		
	17:25	18:07	18:43	37	19:21 (55)	20:21	20:55	21:13	20:59	20:15	19:18	13	18:53 (55)	18:24	16:49	16:51
27	07:49	07:07	07:16	18:44 (55)	06:23	05:47	05:42	06:06	06:41	07:17	18:43 (55)	07:55	07:35	08:00		
	17:26	18:08	18:44	39	19:23 (55)	20:22	20:56	21:13	20:58	20:13	19:16	8	18:51 (55)	18:22	16:49	16:51
28	07:48	07:05	07:15	18:43 (55)	06:21	05:46	05:42	06:07	06:42	07:18	18:44 (55)	07:56	07:37	08:00		
	17:28	18:09	18:45	41	19:24 (55)	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52		
29	07:47	07:13	07:23	18:43 (55)	06:20	05:46	05:43	06:08	06:43	07:19	18:45 (55)	07:57	07:38	08:01		
	17:29	18:10	18:46	42	19:25 (55)	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53		
30	07:46	07:11	07:21	18:42 (55)	06:18	05:45	05:43	06:09	06:44	07:21	18:46 (55)	07:59	07:39	08:01		
	17:31	18:12	18:48	43	19:25 (55)	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:47	16:54		
31	07:45	07:09	07:19	18:42 (55)	06:17	05:44	06:10	06:46	07:21	18:53 (55)	18:00	08:00	08:01	08:01		
	17:32	18:13	18:49	43	19:25 (55)	20:27	21:00	20:53	20:06	13	19:06 (55)	18:17	16:47	16:54		
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276				
Total, worst case			477	387				13	865							
Sun reduction			0.59	0.61				0.74	0.69							
Oper. time red.			0.98	0.98				0.98	0.98							
Wind dir. red.			0.59	0.59				0.59	0.59							
Total reduction			0.34	0.35				0.42	0.40							
Total, real			161	135				6	342							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H149 - H149

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June								
1	08:01	15:48 (54)	07:44	16:05 (54)	07:03	17:22 (53)	07:07	06:17	19:46 (52)	05:44				
	16:56	40	16:28 (54)	17:33	26	16:31 (54)	18:11	20	17:42 (53)	19:50	20:27	18	20:04 (52)	21:01
2	08:01	15:48 (54)	07:43	16:07 (54)	07:02	17:23 (53)	07:05	06:15	19:46 (52)	05:43				
	16:57	41	16:29 (54)	17:35	23	16:30 (54)	18:12	17	17:40 (53)	19:51	20:28	19	20:05 (52)	21:02
3	08:01	15:48 (54)	07:42	16:10 (54)	07:00	17:25 (53)	07:04	06:14	19:46 (52)	05:43				
	16:57	42	16:30 (54)	17:36	18	16:28 (54)	18:13	14	17:39 (53)	19:53	20:30	20	20:06 (52)	21:03
4	08:01	15:48 (54)	07:41	16:13 (54)	06:58	17:29 (53)	07:02	06:12	19:46 (52)	05:42				
	16:58	41	16:29 (54)	17:38	11	16:24 (54)	18:15	6	17:35 (53)	19:54	20:31	20	20:06 (52)	21:03
5	08:01	15:48 (54)	07:39		06:57		07:00	06:11	19:47 (52)	05:42				
	16:59	42	16:30 (54)	17:39		18:16	19:55		20:32	18	20:05 (52)	21:04		
6	08:01	15:49 (54)	07:38		06:55		06:58	06:10	19:48 (52)	05:42				
	17:00	42	16:31 (54)	17:40		18:17	19:56		20:33	17	20:05 (52)	21:05		
7	08:01	15:49 (54)	07:37		06:53		06:56	06:08	19:50 (52)	05:41				
	17:02	43	16:32 (54)	17:42		18:19	19:58		20:34	13	20:03 (52)	21:06		
8	08:01	15:50 (54)	07:36		07:51		06:55	06:07	19:51 (52)	05:41				
	17:03	42	16:32 (54)	17:43		18:20	19:59		20:36	10	20:01 (52)	21:06		
9	08:00	15:49 (54)	07:34		07:49		06:53	06:06	19:54 (52)	05:41				
	17:04	43	16:32 (54)	17:45		19:21	20:00		20:37	3	19:57 (52)	21:07		
10	08:00	15:50 (54)	07:33		07:48		06:51	06:04	19:57 (52)	05:40				
	17:05	43	16:33 (54)	17:46		19:23	20:01		20:38		21:08			
11	08:00	15:50 (54)	07:32		07:46		06:49	06:03	19:58 (52)	05:40				
	17:06	43	16:33 (54)	17:47		19:24	20:03		20:39		21:08			
12	08:00	15:51 (54)	07:30		07:44		06:48	06:02	19:59 (52)	05:40				
	17:07	43	16:34 (54)	17:49		19:25	20:04		20:40		21:09			
13	07:59	15:50 (54)	07:29		07:42		06:46	06:01	19:58 (52)	05:40				
	17:08	44	16:34 (54)	17:50		19:26	20:05		20:41		21:09			
14	07:59	15:51 (54)	07:27		07:40		06:44	06:00	19:57 (52)	05:40				
	17:09	44	16:35 (54)	17:52		19:28	20:06		20:43		21:10			
15	07:58	15:51 (54)	07:26		07:39		06:42	05:58	19:56 (52)	05:40				
	17:11	44	16:35 (54)	17:53		19:29	20:07		20:44		21:10			
16	07:58	15:52 (54)	07:24		17:25 (53)	07:37	06:41	05:57	19:55 (52)	05:40				
	17:12	44	16:36 (54)	17:54	5	17:30 (53)	19:30		20:45		21:11			
17	07:57	15:52 (54)	07:23		17:24 (53)	07:35	06:39	05:56	19:54 (52)	05:40				
	17:13	44	16:36 (54)	17:56	8	17:32 (53)	19:32		20:46		21:11			
18	07:56	15:52 (54)	07:21		17:22 (53)	07:33	06:37	05:55	19:53 (52)	05:40				
	17:14	44	16:36 (54)	17:57	11	17:33 (53)	19:33		20:47		21:12			
19	07:56	15:54 (54)	07:20		17:22 (53)	07:31	06:36	05:54	19:52 (52)	05:40				
	17:16	43	16:37 (54)	17:59	13	17:35 (53)	19:34		20:48		21:12			
20	07:55	15:54 (54)	07:18		17:21 (53)	07:29	06:34	05:53	19:51 (52)	05:40				
	17:17	43	16:37 (54)	18:00	15	17:36 (53)	19:35		20:49		21:12			
21	07:54	15:54 (54)	07:17		17:20 (53)	07:28	06:32	05:52	19:50 (52)	05:40				
	17:18	42	16:36 (54)	18:00	17	17:37 (53)	19:37		20:15		21:13			
22	07:54	15:55 (54)	07:15		17:20 (53)	07:26	06:31	05:51	19:49 (52)	05:41				
	17:20	41	16:36 (54)	18:01	19	17:39 (53)	19:38		20:16		21:13			
23	07:53	15:55 (54)	07:13		17:19 (53)	07:24	06:29	05:50	19:48 (52)	05:41				
	17:21	41	16:36 (54)	18:03	21	17:40 (53)	19:39		20:17	3	19:54 (52)	20:52	21:13	
24	07:52	15:56 (54)	07:12		17:20 (53)	07:22	06:27	05:50	19:49 (52)	05:41				
	17:22	40	16:36 (54)	18:04	22	17:42 (53)	19:40		20:19	7	19:56 (52)	20:53	21:13	
25	07:51	15:57 (54)	07:10		17:20 (53)	07:20	06:26	05:49	19:48 (52)	05:41				
	17:24	39	16:36 (54)	18:05	24	17:44 (53)	19:42		20:20	8	19:56 (52)	20:54	21:13	
26	07:50	15:57 (54)	07:09		17:20 (53)	07:18	06:24	05:48	19:47 (52)	05:42				
	17:25	38	16:35 (54)	18:07	25	17:45 (53)	19:43		20:21	11	19:58 (52)	20:55	21:13	
27	07:49	15:58 (54)	07:07		17:20 (53)	07:17	06:23	05:47	19:46 (52)	05:42				
	17:26	37	16:35 (54)	18:08	24	17:44 (53)	19:44		20:22	13	19:59 (52)	20:56	21:13	
28	07:48	15:59 (54)	07:05		17:21 (53)	07:15	06:21	05:46	19:46 (52)	05:42				
	17:28	36	16:35 (54)	18:09	23	17:44 (53)	19:45		20:23	14	20:00 (52)	20:57	21:13	
29	07:47	16:01 (54)			07:13		06:20	05:46	19:45 (52)	05:43				
	17:29	33	16:34 (54)		19:47		20:25	16	20:01 (52)	20:58	21:13			
30	07:46	16:02 (54)			07:11		06:18	05:45	19:46 (52)	05:43				
	17:31	31	16:33 (54)		19:48		20:26	17	20:03 (52)	20:59	21:13			
31	07:45	16:03 (54)			07:09		05:45		19:45 (52)	21:00				
	17:32	29	16:32 (54)		19:49		21:00			464				
Potential sun hours	288		292		369		403		458		464			
Total, worst case	1262		305		57		89		138					
Sun reduction	0.57		0.59		0.59		0.61		0.65					
Oper. time red.	0.98		0.98		0.98		0.98		0.98					
Wind dir. red.	0.56		0.55		0.55		0.63		0.63					
Total reduction	0.31		0.32		0.31		0.37		0.40					
Total, real	390		96		18		33		55					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H149 - H149

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:01	07:40
	21:13	20:52	20:04	19:09	17:15	16:47
2	05:44	06:12	06:48	07:23	07:03	07:41
	21:13	20:51	20:03	19:07	17:14	16:47
3	05:45	06:13	06:49	07:24	07:04	07:42
	21:13	20:49	20:01	19:05	17:12	16:46
4	05:46	06:14	20:03 (52)	06:50	07:25	07:05
	21:13	20:48	7 20:10 (52)	19:59	19:03	17:11
5	05:46	06:16	20:01 (52)	06:51	07:27	07:07
	21:13	20:47	11 20:12 (52)	19:57	19:01	17:10
6	05:47	06:17	19:59 (52)	06:53	07:28	07:08
	21:12	20:46	15 20:14 (52)	19:55	19:00	17:09
7	05:48	06:18	19:57 (52)	06:54	07:29	07:09
	21:12	20:44	17 20:14 (52)	19:53	18:56	17:07
8	05:48	06:19	19:56 (52)	06:55	07:30	07:11
	21:12	20:43	19 20:15 (52)	19:52	18:54	17:06
9	05:49	06:20	19:55 (52)	06:56	07:32	07:12
	21:11	20:41	21 20:16 (52)	19:50	18:52	17:05
10	05:50	06:21	19:55 (52)	06:57	07:33	18:01 (53)
	21:11	20:40	19 20:14 (52)	19:48	18:51	10 18:11 (53)
11	05:51	06:22	19:54 (52)	06:58	07:34	17:58 (53)
	21:10	20:39	19 20:13 (52)	19:46	18:49	15 18:13 (53)
12	05:51	06:24	19:54 (52)	07:00	07:35	17:56 (53)
	21:10	20:37	17 20:11 (52)	19:44	18:47	19 18:15 (53)
13	05:52	06:25	19:53 (52)	07:01	07:37	17:55 (53)
	21:09	20:36	17 20:10 (52)	19:42	18:45	21 18:16 (53)
14	05:53	06:26	19:54 (52)	07:02	07:38	17:53 (53)
	21:09	20:34	15 20:09 (52)	19:41	18:44	23 18:16 (53)
15	05:54	06:27	19:54 (52)	07:03	07:39	17:52 (53)
	21:08	20:33	14 20:08 (52)	19:39	18:42	25 18:17 (53)
16	05:55	06:28	19:54 (52)	07:04	07:40	17:52 (53)
	21:07	20:31	12 20:06 (52)	19:37	18:40	25 18:17 (53)
17	05:56	06:29	19:54 (52)	07:05	07:42	17:51 (53)
	21:06	20:30	11 20:05 (52)	19:35	18:38	23 18:14 (53)
18	05:57	06:31	19:55 (52)	07:07	07:43	17:50 (53)
	21:06	20:28	8 20:03 (52)	19:33	18:37	22 18:12 (53)
19	05:58	06:32	19:55 (52)	07:08	07:44	17:51 (53)
	21:05	20:26	6 20:01 (52)	19:31	18:35	20 18:11 (53)
20	05:59	06:33	19:57 (52)	07:09	07:45	17:51 (53)
	21:04	20:25	3 20:00 (52)	19:29	18:33	18 18:09 (53)
21	06:00	06:34	07:10	07:47	07:47	17:51 (53)
	21:03	20:23	17 18:27	18:32	17 18:08 (53)	16:53
22	06:01	06:35	07:11	07:48	17:51 (53)	07:29
	21:02	20:22	15 18:26	18:30	15 18:06 (53)	16:52
23	06:02	06:36	07:12	07:49	17:52 (53)	07:31
	21:02	20:20	12 18:24	18:29	12 18:04 (53)	16:51
24	06:03	06:37	07:14	07:51	17:53 (53)	07:32
	21:01	20:18	10 18:22	18:27	10 18:03 (53)	16:51
25	06:04	06:39	07:15	07:52	17:54 (53)	07:33
	21:00	20:16	7 18:20	18:26	7 18:01 (53)	16:50
26	06:05	06:40	07:16	07:53	17:56 (53)	07:34
	20:59	20:15	3 18:18	18:24	3 17:59 (53)	16:50
27	06:06	06:41	07:17	07:55	07:36	15:30 (54)
	20:58	20:13	19:16	18:22	16:49	44 16:14 (54)
28	06:07	06:42	07:18	07:56	07:37	15:31 (54)
	20:56	20:11	19:14	18:21	16:48	44 16:15 (54)
29	06:08	06:43	07:19	07:57	07:38	15:31 (54)
	20:55	20:10	19:12	18:20	16:48	44 16:15 (54)
30	06:09	06:44	07:21	07:59	07:39	15:32 (54)
	20:54	20:08	19:11	18:18	16:47	43 16:15 (54)
31	06:10	06:46	08:00			08:01
	20:53	20:06	18:17			16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case		231		285	879	1223
Sun reduction		0.74		0.63	0.50	0.49
Oper. time red.		0.98		0.98	0.98	0.98
Wind dir. red.		0.63		0.55	0.56	0.56
Total reduction		0.45		0.34	0.27	0.27
Total, real		104		96	238	325

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H150 - H150

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	06:17 20:27	05:44 21:01
2	08:01 16:57	07:43 17:35	07:02 18:12	07:06 19:51	26 20:28	05:43 21:02
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	27 20:30	05:43 21:03
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	28 20:31	05:42 21:03
5	08:01 16:59	07:39 17:39	06:57 18:16	8 07:21 (55) 19:55	07:00 20:32	05:42 21:04
6	08:01 17:00	07:38 17:40	06:55 18:17	17 07:16 (55) 19:56	06:58 20:33	05:42 21:05
7	08:01 17:02	07:37 17:42	06:53 18:19	22 07:13 (55) 19:58	06:56 20:34	05:41 21:06
8	08:01 17:03	07:36 17:43	06:51 18:20	26 08:12 (55) 19:59	06:55 20:36	05:41 21:06
9	08:01 17:04	07:34 17:45	06:49 19:21	29 08:10 (55) 20:00	06:53 20:37	05:41 21:07
10	08:00 17:05	07:33 17:46	06:48 19:23	29 08:08 (55) 20:01	06:51 20:38	05:40 21:08
11	08:00 17:06	07:32 17:48	06:46 19:24	32 08:06 (55) 20:03	06:49 20:39	05:40 21:08
12	08:00 17:07	07:30 17:49	06:44 19:25	41 19:02 (52) 20:04	06:48 20:40	05:40 21:09
13	07:59 17:08	07:29 17:50	06:42 19:26	48 08:04 (55) 20:05	06:46 20:41	05:40 21:09
14	07:59 17:09	07:27 17:52	06:40 19:28	53 19:06 (52) 20:06	06:44 20:43	05:40 21:10
15	07:58 17:11	07:26 17:53	06:39 19:29	57 08:02 (55) 20:08	06:42 20:44	05:40 21:10
16	07:58 17:12	07:24 17:54	06:37 19:30	60 19:08 (52) 20:09	06:41 20:45	05:40 21:11
17	07:57 17:13	07:23 17:56	06:35 19:32	64 08:01 (55) 20:10	06:39 20:46	05:40 21:11
18	07:56 17:14	07:21 17:57	06:33 19:33	65 19:10 (52) 20:11	06:37 20:47	05:40 21:12
19	07:56 17:16	07:20 17:59	06:31 19:34	67 08:00 (55) 20:12	06:36 20:48	05:40 21:12
20	07:55 17:17	07:18 18:00	06:29 19:35	68 19:12 (52) 20:14	06:34 20:49	05:40 21:12
21	07:54 17:18	07:17 18:00	06:28 19:37	71 08:00 (55) 20:15	06:32 4 06:53 (51) 20:50	05:40 21:13
22	07:54 17:20	07:15 18:01	06:26 19:38	72 19:16 (52) 20:16	8 06:51 (51) 20:51	05:41 21:13
23	07:53 17:21	07:13 18:03	06:24 19:39	70 08:00 (55) 20:17	11 06:50 (51) 20:52	05:41 21:13
24	07:52 17:22	07:12 18:04	06:22 19:40	68 19:14 (52) 20:19	13 07:01 (51) 20:53	05:41 21:13
25	07:51 17:24	07:10 18:05	06:20 19:42	65 19:13 (52) 20:20	16 06:48 (51) 20:54	05:41 21:13
26	07:50 17:25	07:09 18:07	06:18 19:43	61 19:12 (52) 20:21	18 07:02 (51) 20:55	05:42 21:13
27	07:49 17:26	07:07 18:08	06:17 19:44	57 08:02 (55) 20:22	20 06:45 (51) 20:56	05:42 21:13
28	07:48 17:28	07:05 18:09	06:15 19:45	51 08:05 (55) 20:23	22 06:43 (51) 20:57	05:42 21:14
29	07:47 17:29		06:14 19:47	44 08:06 (55) 20:25	23 06:42 (51) 20:58	05:43 21:13
30	07:46 17:31		06:13 19:48	34 08:08 (55) 20:26	25 06:39 (51) 20:59	05:43 21:13
31	07:45 17:32		06:12 19:49	18 08:26 (55) 9 08:21 (55)	25 07:04 (51) 21:00	05:45 464
Potential sun hours	288	292	369	403	458	464
Total, worst case			1277	160	333	
Sun reduction			0.59	0.61	0.65	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.60	0.54	0.54	
Total reduction			0.35	0.32	0.35	
Total, real			445	52	115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H150 - H150

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:48 (51)	06:47	07:22	07:43 (55)
	21:13	20:52	19 07:07 (51)	20:04	19:09	50 18:44 (52)
2	05:44	06:12	06:48 (51)	06:48	07:23	07:44 (55)
	21:13	20:51	21 07:09 (51)	20:03	19:07	45 18:42 (52)
3	05:45	06:13	06:46 (51)	06:49	07:24	07:45 (55)
	21:13	20:50	24 07:10 (51)	20:01	19:05	37 18:40 (52)
4	05:46	06:14	06:45 (51)	06:50	07:26	07:46 (55)
	21:13	20:48	26 07:11 (51)	19:59	19:03	31 08:17 (55)
5	05:46	06:16	06:45 (51)	06:51	07:27	07:48 (55)
	21:13	20:47	26 07:11 (51)	19:57	19:01	28 08:16 (55)
6	05:47	06:17	06:44 (51)	06:53	07:28	07:49 (55)
	21:12	20:46	28 07:12 (51)	19:55	19:00	24 08:13 (55)
7	05:48	06:18	06:43 (51)	06:54	07:29	07:50 (55)
	21:12	20:44	29 07:12 (51)	19:54	18:56	20 08:10 (55)
8	05:48	06:19	06:43 (51)	06:55	07:30	07:53 (55)
	21:12	20:43	29 07:12 (51)	19:52	18:54	13 08:06 (55)
9	05:49	06:20	06:43 (51)	06:56	07:32	07:12
	21:11	20:42	29 07:12 (51)	19:50	18:52	17:05
10	05:50	06:21	06:44 (51)	06:57	07:33	07:13
	21:11	20:40	28 07:12 (51)	19:48	18:51	17:04
11	05:51	06:22	06:45 (51)	06:58	07:34	07:15
	21:10	20:39	27 07:12 (51)	19:46	18:49	17:03
12	05:51	06:24	06:46 (51)	07:00	08:06 (55)	07:35
	21:10	20:37	26 07:12 (51)	19:44	6 08:12 (55)	18:47
13	05:52	06:25	06:47 (51)	07:01	08:00 (55)	07:37
	21:09	20:36	24 07:11 (51)	19:42	16 08:16 (55)	18:45
14	05:53	06:26	06:49 (51)	07:02	07:57 (55)	07:38
	21:09	20:34	23 07:12 (51)	19:41	32 18:53 (52)	18:44
15	05:54	06:27	06:50 (51)	07:03	07:54 (55)	07:39
	21:08	20:33	21 07:11 (51)	19:39	42 18:56 (52)	18:42
16	05:55	06:28	06:51 (51)	07:04	07:52 (55)	07:40
	21:07	20:31	19 07:10 (51)	19:37	50 18:57 (52)	18:40
17	05:56	06:29	06:52 (51)	07:05	07:50 (55)	07:42
	21:07	20:30	17 07:09 (51)	19:35	56 18:58 (52)	18:38
18	05:57	06:31	06:53 (51)	07:07	07:50 (55)	07:43
	21:06	20:28	15 07:08 (51)	19:33	60 19:00 (52)	18:37
19	05:58	06:32	06:54 (51)	07:08	07:48 (55)	07:44
	21:05	20:26	13 07:07 (51)	19:31	64 19:00 (52)	18:35
20	05:59	06:33	06:55 (51)	07:09	07:47 (55)	07:45
	21:04	20:25	10 07:05 (51)	19:29	67 19:01 (52)	18:34
21	06:00	06:34	06:56 (51)	07:10	07:46 (55)	07:47
	21:03	20:23	7 07:03 (51)	19:27	70 19:01 (52)	18:32
22	06:01	06:35	06:57 (51)	07:11	07:45 (55)	07:48
	21:02	20:22	3 07:00 (51)	19:26	70 19:00 (52)	18:30
23	06:02	06:36		07:12	07:44 (55)	07:49
	21:02	20:20		19:24	70 18:58 (52)	18:29
24	06:03	06:37		07:14	07:44 (55)	07:51
	21:01	20:18		19:22	70 18:57 (52)	18:27
25	06:04	06:39		07:15	07:44 (55)	07:52
	21:00	20:17		19:20	67 18:55 (52)	18:26
26	06:05	06:40		07:16	07:43 (55)	07:53
	20:59	20:15		19:18	66 18:53 (52)	18:24
27	06:06	06:41		07:17	07:43 (55)	07:55
	20:58	20:13		19:16	63 18:51 (52)	18:22
28	06:07	06:42		07:18	07:43 (55)	07:56
	20:57	20:11		19:14	60 18:49 (52)	18:21
29	06:08	06:54 (51)	06:43	07:19	07:42 (55)	07:57
	20:55	7 07:01 (51)	20:10	19:12	58 18:47 (52)	18:20
30	06:09	06:51 (51)	06:44	07:21	07:43 (55)	07:59
	20:54	13 07:04 (51)	20:08	19:11	54 18:46 (52)	18:18
31	06:10	06:49 (51)	06:46		08:00	08:01
	20:53	17 07:06 (51)	20:06		18:17	16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case	37	464	1041	248		
Sun reduction	0.76	0.74	0.69	0.63		
Oper. time red.	0.98	0.98	0.98	0.98		
Wind dir. red.	0.54	0.54	0.60	0.61		
Total reduction	0.40	0.39	0.41	0.38		
Total, real	15	183	422	94		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H151 - H151

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:41	21:10	21:09	20:36	19:43	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:40	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H152 - H152

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01	08:49 (57)	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	9 08:58 (57)	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	08:51 (57)	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	6 08:57 (57)	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	08:54 (57)	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	1 08:55 (57)	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01		07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59		17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01		07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00		17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01		07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01		17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01		07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02		17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01		07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03		17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01		07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04		17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00		07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05		17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00		07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06		17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00		07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07		17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59		07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08		17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59		07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10		17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58		07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11		17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58		07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12		17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57		07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13		17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57		07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15		17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56		07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16		17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55		07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17		18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55		07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19		18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54		07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20		18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53		07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21		18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52		07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23		18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51		07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24		18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50		07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25		18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27		18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48		07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28		18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:14	18:21	16:49	16:52
29	07:47			07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29			19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46			07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31			19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45			07:09		05:45		06:10	06:46		08:00		08:01
	17:32			19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case		16											298
Sun reduction		0.57											0.49
Oper. time red.		0.98											0.98
Wind dir. red.		0.70											0.70
Total reduction		0.39											0.34
Total, real		6											100

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H153 - H153

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H154 - H154

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H155 - H155

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H156 - H156

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
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	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H157 - H157

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H161 - H161

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:23	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H163 - H163

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H165 - H165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H166 - H166

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:07	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:12	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:54	20:07		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H167 - H167

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H168 - H168

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H169 - H169

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:40	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:15	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H170 - H170

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H171 - H171

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 949 364 341 374 484 625 1,208 924 579 685 870 1,170 8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	08:06 (50)	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:40
	16:56	17:33	21 08:27 (50)	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15
2	08:01	07:43	08:05 (50)	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:41
	16:57	17:35	23 08:28 (50)	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14
3	08:01	07:42	08:04 (50)	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:43
	16:57	17:36	25 08:29 (50)	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12
4	08:01	07:41	08:02 (50)	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:44
	16:58	17:38	27 08:29 (50)	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11
5	08:01	07:39	08:01 (50)	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:45
	16:59	17:39	29 08:30 (50)	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10
6	08:01	07:38	08:00 (50)	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:46
	17:00	17:40	31 08:31 (50)	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09
7	08:01	07:37	07:58 (50)	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:47
	17:01	17:42	33 08:31 (50)	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07
8	08:01	07:36	07:59 (50)	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:48
	17:03	17:43	33 08:32 (50)	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06
9	08:01	07:34	07:59 (50)	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:49
	17:04	17:45	33 08:32 (50)	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05
10	08:00	07:33	07:58 (50)	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:50
	17:05	17:46	34 08:32 (50)	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04
11	08:00	07:32	07:59 (50)	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:51
	17:06	17:47	33 08:32 (50)	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03
12	08:00	07:30	07:58 (50)	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:51
	17:07	17:49	34 08:32 (50)	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01
13	07:59	07:29	07:59 (50)	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:52
	17:08	17:50	33 08:32 (50)	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00
14	07:59	07:27	07:59 (50)	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:53
	17:09	17:52	32 08:31 (50)	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00
15	07:58	07:26	08:00 (50)	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:54
	17:11	17:53	31 08:31 (50)	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	17:00
16	07:58	07:24	08:00 (50)	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:55
	17:12	17:54	30 08:30 (50)	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	17:00
17	07:57	07:23	08:02 (50)	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:55
	17:13	17:56	27 08:29 (50)	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:38	17:00
18	07:57	07:21	08:02 (50)	07:33	06:37	05:55	05:40	05:57	06:30	07:07	07:43	07:56
	17:14	17:57	26 08:28 (50)	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	17:00
19	07:56	07:20	08:04 (50)	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:57
	17:16	17:59	23 08:27 (50)	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	17:00
20	07:55	07:18	08:06 (50)	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:57
	17:17	18:00	18 08:24 (50)	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	7 08:49 (50)
21	07:54	07:17	08:09 (50)	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	08:38 (50)
	17:18	18:00	13 08:22 (50)	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16 08:54 (50)
22	07:54	07:15		07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	08:35 (50)
	17:20	18:01		19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	20 08:55 (50)
23	07:53	07:13		07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	08:33 (50)
	17:21	18:03		19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	24 08:57 (50)
24	07:52	07:12		07:22	06:27	05:50	05:41	06:02	06:37	07:14	07:51	08:33 (50)
	17:22	18:04		19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	25 08:58 (50)
25	07:51	07:10		07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	08:31 (50)
	17:24	18:05		19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	28 08:59 (50)
26	07:50	07:09		07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	08:31 (50)
	17:25	18:07		19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	29 09:00 (50)
27	07:49	07:07		07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	08:30 (50)
	17:26	18:08		19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	31 09:01 (50)
28	07:48	08:11 (50)	18:09	07:05	06:21	05:46	05:42	06:07	06:42	07:18	07:56	08:29 (50)
	17:28	8 08:19 (50)		19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	32 09:01 (50)
29	07:47	08:09 (50)		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	08:29 (50)
	17:29	12 08:21 (50)		19:47	20:25	20:58	21:14	20:55	20:10	19:12	18:19	33 09:02 (50)
30	07:46	08:08 (50)		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	08:28 (50)
	17:31	15 08:23 (50)		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	33 09:01 (50)
31	07:45	08:07 (50)		07:09		05:44		06:10	06:46		08:00	08:28 (50)
	17:32	18 08:25 (50)		19:49		21:00		20:53	20:06		18:17	34 09:02 (50)
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case	53	589									312	342
Sun reduction	0.57	0.59									0.63	0.50
Oper. time red.	0.98	0.98									0.98	0.98
Wind dir. red.	0.67	0.67									0.67	0.67
Total reduction	0.38	0.39									0.41	0.33
Total, real	20	229									129	113

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H172 - H172

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:01	07:44	08:20 (51)	07:03	17:08 (49)	07:07	06:17	06:48 (50)	05:44	
	16:56	17:33	12 08:32 (51)	18:11	41 17:49 (49)	19:50	20:27	31 07:19 (50)	21:01	
2	08:01	07:43	08:24 (51)	07:02	17:07 (49)	07:06	06:15	06:48 (50)	05:43	
	16:57	17:35	5 08:29 (51)	18:12	43 17:50 (49)	19:51	20:28	30 07:18 (50)	21:02	
3	08:01	07:42	07:00	07:00	17:07 (49)	07:04	06:14	06:49 (50)	05:43	
	16:57	17:36	18:13	45 17:52 (49)	19:53	20:30	28 07:17 (50)	21:03		
4	08:01	07:41	06:58	17:06 (49)	07:02	06:12	06:49 (50)	05:42		
	16:58	17:38	18:15	46 17:52 (49)	19:54	20:31	26 07:15 (50)	21:03		
5	08:01	07:39	06:57	17:05 (49)	07:00	06:11	06:50 (50)	05:42		
	16:59	17:39	18:16	47 17:52 (49)	19:55	20:32	24 07:14 (50)	21:04		
6	08:01	07:38	06:55	17:04 (49)	06:58	06:10	06:52 (50)	05:42		
	17:00	17:40	18:17	48 17:52 (49)	19:56	20:33	21 07:13 (50)	21:05		
7	08:01	07:37	06:53	17:03 (49)	06:56	06:08	06:53 (50)	05:41		
	17:01	17:42	18:19	49 17:52 (49)	19:58	20:34	19 07:12 (50)	21:06		
8	08:01	07:36	07:51	18:03 (49)	06:55	06:07	06:55 (50)	05:41		
	17:03	17:43	18:20	50 18:53 (49)	19:59	20:36	14 07:09 (50)	21:06		
9	08:01	07:34	07:49	18:03 (49)	06:53	06:06	06:58 (50)	05:41		
	17:04	17:45	19:21	50 18:53 (49)	20:00	20:37	8 07:06 (50)	21:07		
10	08:00	08:24 (51)	07:33	07:48	18:02 (49)	06:51	06:04	05:40		
	17:05	2 08:26 (51)	17:46	19:23	50 18:52 (49)	20:01	20:38	21:08		
11	08:00	08:23 (51)	07:32	07:46	18:02 (49)	06:49	06:03	05:40		
	17:06	4 08:27 (51)	17:47	19:24	50 18:52 (49)	20:03	20:39	21:08		
12	08:00	08:23 (51)	07:30	07:44	18:02 (49)	06:48	06:02	05:40		
	17:07	6 08:29 (51)	17:49	19:25	49 18:51 (49)	20:04	20:40	21:09		
13	07:59	08:23 (51)	07:29	07:42	18:03 (49)	06:46	07:06 (50)	06:01	05:40	
	17:08	7 08:30 (51)	17:50	19:26	49 18:52 (49)	20:05	3 07:09 (50)	20:41	21:09	
14	07:59	08:22 (51)	07:27	07:40	18:03 (49)	06:44	07:04 (50)	06:00	05:40	
	17:09	9 08:31 (51)	17:52	19:28	48 18:51 (49)	20:06	10 07:14 (50)	20:43	21:10	
15	07:58	08:21 (51)	07:26	07:39	18:03 (49)	06:42	07:03 (50)	05:58	05:40	
	17:11	10 08:31 (51)	17:53	19:29	47 18:50 (49)	20:08	14 07:17 (50)	20:44	21:10	
16	07:58	08:21 (51)	07:24	07:37	18:03 (49)	06:41	07:01 (50)	05:57	05:40	
	17:12	12 08:33 (51)	17:54	19:30	46 18:49 (49)	20:09	17 07:18 (50)	20:45	21:11	
17	07:57	08:20 (51)	07:23	07:35	18:03 (49)	06:39	06:59 (50)	05:56	05:40	
	17:13	13 08:33 (51)	17:56	19:32	45 18:48 (49)	20:10	20 07:19 (50)	20:46	21:11	
18	07:57	08:19 (51)	07:21	07:33	18:04 (49)	06:37	06:58 (50)	05:55	05:40	
	17:14	14 08:33 (51)	17:57	19:33	43 18:47 (49)	20:11	22 07:20 (50)	20:47	21:12	
19	07:56	08:19 (51)	07:20	07:31	18:04 (49)	06:36	06:56 (50)	05:54	05:40	
	17:16	16 08:35 (51)	17:59	19:34	41 18:45 (49)	20:12	24 07:20 (50)	20:48	21:12	
20	07:55	08:18 (51)	07:18	07:29	18:06 (49)	06:34	06:54 (50)	05:53	05:40	
	17:17	17 08:35 (51)	18:00	19:35	39 18:45 (49)	20:14	27 07:21 (50)	20:49	21:12	
21	07:54	08:17 (51)	07:17	07:28	18:07 (49)	06:32	06:53 (50)	05:52	05:40	
	17:18	18 08:35 (51)	18:00	19:37	36 18:43 (49)	20:15	29 07:22 (50)	20:50	21:13	
22	07:54	08:16 (51)	07:15	17:25 (49)	07:26	18:09 (49)	06:31	06:51 (50)	05:51	05:40
	17:20	19 08:35 (51)	18:01	11 17:36 (49)	19:38	32 18:41 (49)	20:16	30 07:21 (50)	20:51	21:13
23	07:53	08:15 (51)	07:13	17:20 (49)	07:24	18:10 (49)	06:29	06:49 (50)	05:50	05:41
	17:21	21 08:36 (51)	18:03	20 17:40 (49)	19:39	28 18:38 (49)	20:17	32 07:21 (50)	20:52	21:13
24	07:52	08:14 (51)	07:12	17:17 (49)	07:22	18:12 (49)	06:27	06:48 (50)	05:50	05:41
	17:22	22 08:36 (51)	18:04	25 17:42 (49)	19:40	23 18:35 (49)	20:19	34 07:22 (50)	20:53	21:13
25	07:51	08:14 (51)	07:10	17:15 (49)	07:20	18:16 (49)	06:26	06:46 (50)	05:49	05:41
	17:24	23 08:37 (51)	18:05	29 17:44 (49)	19:42	15 18:31 (49)	20:20	35 07:21 (50)	20:54	21:13
26	07:50	08:14 (51)	07:09	17:13 (49)	07:18	18:17 (49)	06:24	06:47 (50)	05:48	05:42
	17:25	23 08:37 (51)	18:07	32 17:45 (49)	19:43	20:21	34 07:21 (50)	20:55	21:13	
27	07:49	08:14 (51)	07:07	17:12 (49)	07:17	18:18 (49)	06:23	06:46 (50)	05:47	05:42
	17:26	22 08:36 (51)	18:08	35 17:47 (49)	19:44	20:22	34 07:20 (50)	20:56	21:14	
28	07:48	08:14 (51)	07:05	17:10 (49)	07:15	18:19 (49)	06:21	06:47 (50)	05:46	05:42
	17:28	21 08:35 (51)	18:09	38 17:48 (49)	19:45	20:23	33 07:20 (50)	20:57	21:14	
29	07:47	08:15 (51)	07:04	17:13 (49)	07:13	18:20 (49)	06:20	06:46 (50)	05:46	05:43
	17:29	20 08:35 (51)	18:09	39 17:49 (49)	19:47	20:25	33 07:19 (50)	20:58	21:14	
30	07:46	08:17 (51)	07:03	17:14 (49)	07:11	18:21 (49)	06:18	06:47 (50)	05:45	05:43
	17:31	17 08:34 (51)	18:06	40 17:49 (49)	19:48	20:26	32 07:19 (50)	20:59	21:13	
31	07:45	08:18 (51)	07:02	17:15 (49)	07:09	18:22 (49)	06:17	06:47 (50)	05:45	05:43
	17:32	15 08:33 (51)	18:04	41 17:49 (49)	19:49	20:27	31 07:19 (50)	21:00	21:13	
Potential sun hours	288	292	369	403	458	464				
Total, worst case	331	207	1060	463	201					
Sun reduction	0.57	0.59	0.59	0.61	0.65					
Oper. time red.	0.98	0.98	0.98	0.98	0.98					
Wind dir. red.	0.69	0.55	0.54	0.54	0.54					
Total reduction	0.39	0.32	0.31	0.32	0.34					
Total, real	128	66	332	149	69					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H172 - H172

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:11	06:47	07:22	17:42 (49)	07:01	07:40	08:05 (51)
	21:13	20:52	20:04	19:09	49 18:31 (49)	17:15	16:47	4 08:09 (51)
2	05:44	06:12	06:48	07:23	17:41 (49)	07:03	07:41	08:07 (51)
	21:13	20:51	20:03	19:07	50 18:31 (49)	17:14	16:47	2 08:09 (51)
3	05:45	06:13	06:49	07:24	17:40 (49)	07:04	07:43	08:08 (51)
	21:13	20:50	20:01	19:05	50 18:30 (49)	17:12	16:46	1 08:09 (51)
4	05:46	06:14	07:07 (50)	06:50	07:26	17:40 (49)	07:05	07:44
	21:13	20:48	11 07:18 (50)	19:59	19:03	51 18:31 (49)	17:11	16:46
5	05:46	06:16	07:05 (50)	06:51	07:27	17:40 (49)	07:07	07:45
	21:13	20:47	15 07:20 (50)	19:57	19:01	50 18:30 (49)	17:10	16:46
6	05:47	06:17	07:03 (50)	06:53	07:28	17:40 (49)	07:08	07:46
	21:12	20:46	19 07:22 (50)	19:55	19:00	49 18:29 (49)	17:09	16:46
7	05:48	06:18	07:01 (50)	06:54	07:29	17:39 (49)	07:09	07:47
	21:12	20:44	22 07:23 (50)	19:54	18:56	49 18:28 (49)	17:07	16:46
8	05:48	06:19	06:59 (50)	06:55	07:30	17:39 (49)	07:11	07:48
	21:12	20:43	25 07:24 (50)	19:52	18:54	48 18:27 (49)	17:06	16:45
9	05:49	06:20	06:58 (50)	06:56	07:32	17:40 (49)	07:12	07:49
	21:11	20:42	27 07:25 (50)	19:50	18:52	47 18:27 (49)	17:05	6 08:00 (51)
10	05:50	06:21	06:57 (50)	06:57	07:33	17:40 (49)	07:13	07:50
	21:11	20:40	29 07:26 (50)	19:48	18:51	46 18:26 (49)	17:04	12 08:03 (51)
11	05:51	06:22	06:56 (50)	06:58	07:34	17:40 (49)	07:15	07:51
	21:10	20:39	30 07:26 (50)	19:46	18:49	45 18:25 (49)	17:03	15 08:04 (51)
12	05:51	06:24	06:55 (50)	07:00	07:35	17:42 (49)	07:16	07:52
	21:10	20:37	32 07:27 (50)	19:44	18:47	42 18:24 (49)	17:01	18 08:06 (51)
13	05:52	06:25	06:54 (50)	07:01	07:37	17:42 (49)	07:18	07:53
	21:09	20:36	33 07:27 (50)	19:42	18:45	40 18:22 (49)	17:00	20 08:07 (51)
14	05:53	06:26	06:55 (50)	07:02	07:38	17:43 (49)	07:19	07:54
	21:09	20:34	33 07:28 (50)	19:41	18:44	37 18:20 (49)	16:59	21 08:08 (51)
15	05:54	06:27	06:54 (50)	07:03	07:39	17:45 (49)	07:20	07:55
	21:08	20:33	34 07:28 (50)	19:39	18:42	34 18:19 (49)	16:58	22 08:08 (51)
16	05:55	06:28	06:54 (50)	07:04	07:40	17:46 (49)	07:22	07:56
	21:07	20:31	34 07:28 (50)	19:37	18:40	30 18:16 (49)	16:57	23 08:10 (51)
17	05:56	06:29	06:53 (50)	07:05	07:42	17:47 (49)	07:23	07:57
	21:07	20:30	35 07:28 (50)	19:35	18:38	27 18:14 (49)	16:56	23 08:10 (51)
18	05:57	06:30	06:53 (50)	07:07	07:43	17:50 (49)	07:24	07:58
	21:06	20:28	35 07:28 (50)	19:33	14 18:19 (49)	18:37	23 18:13 (49)	16:55
19	05:58	06:32	06:54 (50)	07:08	07:44	18:01 (49)	07:25	22 08:10 (51)
	21:05	20:26	33 07:27 (50)	19:31	21 18:22 (49)	18:35	17 18:10 (49)	16:55
20	05:59	06:33	06:55 (50)	07:09	07:46	17:57 (49)	07:27	07:59
	21:04	20:25	32 07:27 (50)	19:29	27 18:24 (49)	18:34	5 18:03 (49)	16:54
21	06:00	06:34	06:56 (50)	07:10	07:47	17:55 (49)	07:28	07:58
	21:03	20:23	30 07:26 (50)	19:27	31 18:26 (49)	18:32	16:53	18 08:11 (51)
22	06:00	06:35	06:57 (50)	07:11	07:48	17:52 (49)	07:29	07:59
	21:03	20:22	28 07:25 (50)	19:26	35 18:27 (49)	18:30	16:52	17 08:11 (51)
23	06:01	06:36	06:59 (50)	07:12	07:49	17:50 (49)	07:29	07:59
	21:02	20:20	26 07:25 (50)	19:24	38 18:28 (49)	18:29	16:51	16 08:11 (51)
24	06:03	06:37	07:00 (50)	07:14	07:51	17:49 (49)	07:31	07:59
	21:01	20:18	24 07:24 (50)	19:22	40 18:29 (49)	18:27	16:51	14 08:11 (51)
25	06:04	06:39	07:01 (50)	07:15	07:52	17:48 (49)	07:32	07:58
	21:00	20:17	22 07:23 (50)	19:20	42 18:30 (49)	18:26	16:50	13 08:11 (51)
26	06:05	06:40	07:02 (50)	07:16	07:53	17:46 (49)	07:33	07:59
	20:59	20:15	19 07:21 (50)	19:18	44 18:30 (49)	18:24	16:50	12 08:11 (51)
27	06:06	06:41	07:03 (50)	07:17	07:55	17:45 (49)	07:36	08:00
	20:58	20:13	17 07:20 (50)	19:16	45 18:30 (49)	18:22	16:49	10 08:11 (51)
28	06:07	06:42	07:04 (50)	07:18	07:56	17:44 (49)	07:37	08:01
	20:57	20:11	13 07:17 (50)	19:14	46 18:30 (49)	18:21	16:48	9 08:11 (51)
29	06:08	06:43	07:05 (50)	07:19	07:57	17:42 (49)	07:38	08:01
	20:55	20:10	9 07:14 (50)	19:12	48 18:30 (49)	18:20	16:48	7 08:10 (51)
30	06:09	06:44	07:06 (50)	07:21	07:59	17:42 (49)	07:39	08:01
	20:54	20:08	2 07:08 (50)	19:11	49 18:31 (49)	18:18	16:47	6 08:10 (51)
31	06:10	06:46			08:00			08:01
	20:53	20:06			18:17			16:55
Potential sun hours	470	435	377	341	289	276		
Total, worst case		669	480	789	344	7		
Sun reduction		0.74	0.69	0.63	0.50	0.49		
Oper. time red.		0.98	0.98	0.98	0.98	0.98		
Wind dir. red.		0.54	0.54	0.54	0.69	0.69		
Total reduction		0.39	0.37	0.33	0.34	0.33		
Total, real		261	176	264	117	2		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H173 - H173

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01 16:56	07:44 17:33	08:06 (51) 17:08 (52)	07:03 18:11	08:01 (51) 19:50	06:17 20:27
2	08:01 16:57	07:43 17:35	08:05 (51) 17:09 (52)	07:02 18:12	08:05 (51) 19:51	23 20:01 (49)
3	08:01 16:57	07:42 17:36	08:04 (51) 17:11 (52)	07:00 18:13	08:15 (51) 19:51	21 19:38 (49)
4	08:01 16:58	07:41 17:38	08:02 (51) 17:12 (52)	06:58 18:15	07:02 19:54	21 19:59 (49)
5	08:01 16:59	07:39 17:39	08:01 (51) 17:14 (52)	06:57 18:16	07:00 19:55	20 19:40 (49)
6	08:01 17:00	07:38 17:40	08:00 (51) 17:16 (52)	06:55 18:17	06:58 19:56	16 19:56 (49)
7	08:01 17:01	07:37 17:42	07:58 (51) 17:16 (52)	06:53 18:19	06:56 19:58	13 19:42 (49)
8	08:01 17:03	07:36 17:43	07:57 (51) 17:18 (52)	06:51 18:20	06:55 19:59	7 19:52 (49)
9	08:01 17:04	07:34 17:45	07:56 (51) 17:17 (52)	07:49 19:21	06:53 20:00	685 870
10	08:00 17:05	07:33 17:46	07:54 (51) 17:15 (52)	07:48 19:23	06:51 20:01	1,170 8,575
11	08:00 17:06	07:32 17:47	07:53 (51) 17:13 (52)	07:46 19:24	06:49 20:03	
12	08:00 17:07	07:30 17:49	07:51 (51) 08:34 (51)	07:44 19:25	06:48 20:04	
13	07:59 17:08	07:29 17:50	07:50 (51) 08:34 (51)	07:42 19:26	06:46 20:05	
14	07:59 17:09	07:27 17:52	07:49 (51) 08:34 (51)	07:40 19:28	06:44 20:06	
15	07:58 17:11	07:26 17:53	07:50 (51) 08:35 (51)	07:39 19:29	06:42 20:08	
16	07:58 17:12	07:24 17:54	07:49 (51) 08:34 (51)	07:37 19:30	06:41 20:09	
17	07:57 17:13	07:23 17:56	07:50 (51) 08:34 (51)	07:35 19:32	06:39 20:10	
18	07:56 17:14	07:21 17:57	07:50 (51) 08:34 (51)	07:33 19:33	06:37 20:11	
19	07:56 17:16	07:20 17:59	07:50 (51) 08:34 (51)	07:31 19:34	06:36 20:12	
20	07:55 17:17	07:18 18:00	07:50 (51) 08:33 (51)	07:29 19:35	06:34 20:14	
21	07:54 17:18	07:17 18:00	07:51 (51) 08:33 (51)	07:28 19:37	06:32 20:15	
22	07:54 17:20	07:15 18:01	07:52 (51) 08:32 (51)	07:26 19:38	06:31 20:16	
23	07:53 17:21	07:13 18:03	07:52 (51) 08:31 (51)	07:24 19:39	06:29 20:17	
24	07:52 17:22	07:12 18:04	07:53 (51) 08:30 (51)	07:22 19:40	06:27 20:19	
25	07:51 17:24	07:10 18:05	07:54 (51) 08:28 (51)	07:20 19:42	06:26 20:20	
26	07:50 17:25	07:09 18:07	07:55 (51) 08:27 (51)	07:18 19:43	06:24 20:21	
27	07:49 17:26	07:07 18:08	07:56 (51) 08:24 (51)	07:17 19:44	06:23 20:22	
28	07:48 17:28	16:59 (52) 17:01 (52)	07:05 18:09	07:15 08:23 (51)	06:21 20:23	
29	07:47 17:29	08:09 (51) 17:03 (52)		07:13 19:47	06:20 20:25	
30	07:46 17:31	08:08 (51) 17:04 (52)		07:11 19:48	06:18 20:26	
31	07:45 17:32	08:07 (51) 17:06 (52)		07:09 19:49	06:17 21:00	
Potential sun hours	288	292	369	403	458	464
Total, worst case	49	1155	29	242	100	
Sun reduction	0.57	0.59	0.59	0.61	0.65	
Oper. time red.	0.98	0.98	0.98	0.98	0.98	
Wind dir. red.	0.62	0.65	0.67	0.62	0.62	
Total reduction	0.35	0.38	0.38	0.37	0.40	
Total, real	17	435	11	90	40	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H173 - H173

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:01	07:24 (51)
	21:13	20:52	20:04	19:09	17:15	16:45 (52)
2	05:44	06:12	06:48	07:23	07:03	07:25 (51)
	21:13	20:51	20:03	19:07	17:14	16:46 (52)
3	05:45	06:13	06:49	07:24	07:04	07:27 (51)
	21:13	20:50	20:01	19:05	17:12	16:47 (52)
4	05:46	06:14	06:50	07:25	07:05	07:28 (51)
	21:13	20:48	19:59	19:03	17:11	16:46 (52)
5	05:46	06:16	06:51	07:27	07:07	07:30 (51)
	21:13	20:47	19:57	19:01	17:10	16:45 (52)
6	05:47	06:17	06:53	07:28	07:08	07:31 (51)
	21:12	20:46	19:55	19:00	17:09	16:43 (52)
7	05:48	06:18	19:53 (49)	06:54	07:29	07:09
	21:12	20:44	20:03 (49)	19:54	18:56	17:07
8	05:48	06:19	19:51 (49)	06:55	07:30	07:11
	21:12	20:43	20:05 (49)	19:52	18:54	17:06
9	05:49	06:20	19:49 (49)	06:56	07:32	07:12
	21:11	20:42	20:07 (49)	19:50	18:52	17:05
10	05:50	06:21	19:47 (49)	06:57	07:33	07:13
	21:11	20:40	20:08 (49)	19:48	18:51	17:04
11	05:51	06:22	19:46 (49)	06:58	07:34	07:15
	21:10	20:39	20:08 (49)	19:46	18:49	17:03
12	05:51	06:24	19:45 (49)	07:00	07:35	08:37 (51)
	21:10	20:37	20:09 (49)	19:44	18:47	17:01
13	05:52	06:25	19:44 (49)	07:01	07:37	08:33 (51)
	21:09	20:36	20:09 (49)	19:42	18:45	17:00
14	05:53	06:26	19:44 (49)	07:02	07:38	08:30 (51)
	21:09	20:34	20:09 (49)	19:41	18:44	17:00
15	05:54	06:27	19:44 (49)	07:03	07:39	08:28 (51)
	21:08	20:33	20:08 (49)	19:39	18:42	17:00
16	05:55	06:28	19:43 (49)	07:04	07:40	08:27 (51)
	21:07	20:31	20:06 (49)	19:37	18:40	17:00
17	05:56	06:29	19:43 (49)	07:05	07:42	08:25 (51)
	21:07	20:30	20:05 (49)	19:35	18:38	17:00
18	05:57	06:30	19:42 (49)	07:06	07:43	08:24 (51)
	21:06	20:28	20:03 (49)	19:33	18:37	17:00
19	05:58	06:32	19:42 (49)	07:08	07:44	08:23 (51)
	21:05	20:26	20:01 (49)	19:31	18:35	17:00
20	05:59	06:33	19:42 (49)	07:09	07:45	08:22 (51)
	21:04	20:25	20:00 (49)	19:29	18:33	17:00
21	05:59	06:34	19:42 (49)	07:10	07:47	08:22 (51)
	21:03	20:23	19:58 (49)	19:27	18:32	17:00
22	06:00	06:35	19:42 (49)	07:11	07:48	08:21 (51)
	21:02	20:22	19:56 (49)	19:26	18:30	17:00
23	06:01	06:36	19:44 (49)	07:12	07:49	08:20 (51)
	21:02	20:20	19:55 (49)	19:24	18:29	17:00
24	06:03	06:37	19:44 (49)	07:14	07:51	08:20 (51)
	21:01	20:18	19:54 (49)	19:22	18:27	17:00
25	06:04	06:39	19:45 (49)	07:15	07:52	08:19 (51)
	21:00	20:17	19:52 (49)	19:20	18:26	17:00
26	06:05	06:40	19:47 (49)	07:16	07:53	08:19 (51)
	20:59	20:15	19:50 (49)	19:18	18:24	17:00
27	06:06	06:41	07:17	07:55	08:19 (51)	07:36
	20:58	20:13	19:16	18:22	17:00	16:51
28	06:07	06:42	07:18	07:56	08:19 (51)	07:37
	20:57	20:11	19:14	18:21	17:00	16:52
29	06:08	06:43	07:19	07:57	08:20 (51)	07:38
	20:55	20:10	19:12	18:19	17:00	16:53
30	06:09	06:44	07:21	07:59	08:21 (51)	07:39
	20:54	20:08	19:11	18:18	17:00	16:54
31	06:10	06:46	08:00	08:23 (51)	08:23 (51)	08:01
	20:53	20:06	18:17	17:43 (52)	17:43 (52)	16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case		347		764	477	
Sun reduction		0.74		0.63	0.50	
Oper. time red.		0.98		0.98	0.98	
Wind dir. red.		0.62		0.66	0.63	
Total reduction		0.45		0.41	0.31	
Total, real		157		313	147	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H174 - H174

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	19:21 (51) 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	19:22 (51) 19:31 (51)	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	19:20 (51) 20:28	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:02	19:20 (51) 19:34 (51)	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	19:20 (51) 20:29	05:43 21:03	05:45 21:13	06:13 20:49	06:49 20:01	19:18 (51) 19:35 (51)	07:24 19:05	07:04 17:12	07:42 16:46
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	19:19 (51) 20:31	06:12 21:03	05:42 21:13	06:14 20:48	06:50 19:59	19:16 (51) 19:34 (51)	07:25 19:03	07:05 17:11	07:43 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	19:19 (51) 20:32	06:11 21:04	05:42 21:12	06:15 20:47	06:51 19:57	19:16 (51) 19:32 (51)	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	19:19 (51) 20:33	06:09 21:05	05:42 21:12	06:17 20:46	06:52 19:55	19:15 (51) 19:31 (51)	07:28 18:58	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	19:19 (51) 20:34	06:08 21:06	05:47 21:12	06:18 20:44	06:54 19:53	19:14 (51) 19:29 (51)	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:55 19:59	19:20 (51) 20:35	06:07 21:06	05:48 21:11	06:19 20:43	06:55 19:52	19:13 (51) 19:27 (51)	07:30 18:54	07:11 17:06	07:48 16:45
9	08:00 17:04	07:34 17:45	07:49 19:21	06:53 20:00	19:20 (51) 20:37	06:06 21:07	05:49 21:11	06:20 20:41	06:56 19:50	19:13 (51) 19:25 (51)	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	07:48 19:22	06:51 20:01	19:21 (51) 20:38	06:04 21:08	05:50 21:11	06:21 20:40	06:57 19:48	19:13 (51) 19:23 (51)	07:33 18:50	07:13 17:04	07:49 16:45
11	08:00 17:06	07:31 17:47	07:46 19:24	06:49 20:02	19:23 (51) 20:39	06:03 21:08	05:50 21:10	06:22 20:39	06:58 19:46	19:14 (51) 19:22 (51)	07:34 18:49	07:15 17:02	07:50 16:45
12	07:59 17:07	07:30 17:49	07:44 19:25	06:47 20:04	19:32 (51) 20:40	06:02 21:09	05:40 21:10	06:23 20:37	06:59 19:44	19:15 (51) 19:26 (51)	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	20:41 21:09	05:40 21:09	05:52 21:09	06:25 20:36	07:01 19:42	19:16 (51) 19:18 (51)	07:36 18:45	07:17 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:42	05:40 21:10	05:53 21:08	06:26 20:34	07:02 19:40	19:18 (51) 19:25 (51)	07:38 18:43	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:07	05:58 20:44	05:40 21:10	05:54 21:08	06:27 20:33	07:03 19:39	18:43 18:42	07:39 16:58	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	18:40 18:40	07:40 16:57	07:21 16:57	07:54 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:06	06:29 20:29	07:05 19:35	18:38 18:38	07:42 16:56	07:23 16:56	07:55 16:46
18	07:56 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:30 20:28	07:06 19:33	18:37 18:37	07:43 16:55	07:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:58	07:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:32 20:26	07:08 19:31	18:35 18:35	07:44 16:54	07:25 16:54	07:56 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	18:33 18:33	07:45 16:54	07:27 16:54	07:57 16:47
21	07:54 17:18	07:17 18:00	07:27 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	18:32 18:32	07:47 16:53	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:02	06:35 20:21	07:11 19:25	18:30 18:30	07:48 16:52	07:29 16:48	07:58 16:48
23	07:53 17:21	07:13 18:03	07:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:01 21:01	06:36 20:20	07:12 19:24	18:29 18:29	07:49 16:51	07:30 16:49	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:18	05:49 20:53	05:41 21:13	06:02 21:01	06:37 20:18	07:13 19:22	18:27 18:27	07:51 16:51	07:32 16:49	07:59 16:49
25	07:51 17:24	07:10 18:05	07:20 19:41	06:26 20:20	05:49 20:54	05:41 21:13	06:03 21:00	06:39 20:16	07:15 19:20	18:25 18:25	07:52 16:50	07:33 16:50	07:59 16:50
26	07:50 17:25	07:08 18:07	07:18 19:43	06:24 20:21	05:48 20:55	05:42 21:13	06:04 20:59	07:16 20:15	19:16 19:18	18:24 18:24	07:53 16:49	07:34 16:51	08:00 16:51
27	07:49 17:26	07:07 18:08	07:16 19:44	06:23 20:22	05:47 20:56	05:42 21:13	06:06 20:57	06:41 20:13	07:17 19:16	18:22 18:22	07:55 16:49	07:35 16:51	08:00 16:51
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:23	05:46 20:57	05:42 21:13	06:07 20:56	06:42 20:11	07:18 19:14	18:21 18:21	07:56 16:48	07:37 16:48	08:00 16:52
29	07:47 17:29	07:04 19:46	07:13 19:46	06:20 20:25	05:46 20:58	05:43 21:13	06:08 20:55	06:43 20:10	07:19 19:12	18:19 18:19	07:57 16:48	07:38 16:48	08:01 16:53
30	07:46 17:31	07:03 19:48	07:11 19:48	19:25 (51) 20:26	06:18 20:26	05:43 20:59	06:09 21:13	06:44 20:08	07:21 19:11	18:18 18:18	07:59 16:47	07:39 16:47	08:01 16:54
31	07:45 17:32	07:09 19:49	07:09 19:49	19:23 (51) 19:27 (51)	06:18 20:26	05:44 21:00	06:10 20:53	06:46 20:06	19:11	18:00 18:17	16:47 16:54	08:01 16:54	08:01 16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case				5	142				155				
Sun reduction			0.59		0.61				0.69				
Oper. time red.			0.98		0.98				0.98				
Wind dir. red.			0.61		0.61				0.61				
Total reduction			0.35		0.36				0.41				
Total, real			2		51				64				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H175 - H175

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:01	16:10 (51)	07:44	07:03	07:07	19:21 (50)	06:17	05:44
	16:56	18 16:28 (51)	17:33	18:11	19:50	7 19:28 (50)	20:27	21:01
2	08:01	16:11 (51)	07:43	07:02	07:05	19:20 (50)	06:15	05:43
	16:56	18 16:29 (51)	17:35	18:12	19:51	9 19:29 (50)	20:28	21:02
3	08:01	16:11 (51)	07:42	07:00	07:04	19:19 (50)	06:14	05:43
	16:57	19 16:30 (51)	17:36	18:13	19:53	12 19:31 (50)	20:29	21:03
4	08:01	16:11 (51)	07:41	06:58	07:02	19:18 (50)	06:12	05:42
	16:58	19 16:30 (51)	17:38	18:15	19:54	14 19:32 (50)	20:31	21:03
5	08:01	16:11 (51)	07:39	06:56	07:00	19:18 (50)	06:11	05:42
	16:59	20 16:31 (51)	17:39	18:16	19:55	15 19:33 (50)	20:32	21:04
6	08:01	16:12 (51)	07:38	06:55	06:58	19:17 (50)	06:09	05:42
	17:00	20 16:32 (51)	17:40	18:17	19:56	17 19:34 (50)	20:33	21:05
7	08:01	16:13 (51)	07:37	06:53	06:56	19:17 (50)	06:08	05:41
	17:01	21 16:34 (51)	17:42	18:19	19:58	18 19:35 (50)	20:34	21:06
8	08:01	16:13 (51)	07:36	07:51	06:55	19:18 (50)	06:07	05:41
	17:02	21 16:34 (51)	17:43	18:20	19:59	19 19:37 (50)	20:35	21:06
9	08:00	16:13 (51)	07:34	07:49	06:53	19:18 (50)	06:06	05:41
	17:04	22 16:35 (51)	17:45	19:21	20:00	20 19:38 (50)	20:37	21:07
10	08:00	16:14 (51)	07:33	07:48	06:51	19:18 (50)	06:04	05:40
	17:05	23 16:37 (51)	17:46	19:22	20:01	20 19:38 (50)	20:38	21:08
11	08:00	16:14 (51)	07:32	07:46	06:49	19:19 (50)	06:03	05:40
	17:06	24 16:38 (51)	17:47	19:24	20:02	17 19:36 (50)	20:39	21:08
12	07:59	16:15 (51)	07:30	07:44	06:47	19:21 (50)	06:02	05:40
	17:07	24 16:39 (51)	17:49	19:25	20:04	14 19:35 (50)	20:40	21:09
13	07:59	16:16 (51)	07:29	07:42	06:46	19:22 (50)	06:01	05:40
	17:08	22 16:38 (51)	17:50	19:26	20:05	10 19:32 (50)	20:41	21:09
14	07:59	16:17 (51)	07:27	07:40	06:44		05:59	05:40
	17:09	22 16:39 (51)	17:52	19:28	20:06		20:42	21:10
15	07:58	16:17 (51)	07:26	07:39	06:42		05:58	05:40
	17:11	21 16:38 (51)	17:53	19:29	20:07		20:44	21:10
16	07:58	16:19 (51)	07:24	07:37	06:41		05:57	05:40
	17:12	20 16:39 (51)	17:54	19:30	20:09		20:45	21:11
17	07:57	16:19 (51)	07:23	07:35	06:39		05:56	05:40
	17:13	19 16:38 (51)	17:56	19:31	20:10		20:46	21:11
18	07:56	16:20 (51)	07:21	07:33	06:37		05:55	05:40
	17:14	17 16:37 (51)	17:57	19:33	20:11		20:47	21:12
19	07:56	16:22 (51)	07:20	07:31	06:35		05:54	05:40
	17:16	15 16:37 (51)	17:58	19:34	20:12		20:48	21:12
20	07:55	16:24 (51)	07:18	07:29	06:34		05:53	05:40
	17:17	12 16:36 (51)	18:00	19:35	20:14		20:49	21:12
21	07:54	16:26 (51)	07:17	07:28	06:32		05:52	05:40
	17:18	8 16:34 (51)	18:00	19:36	20:15		20:50	21:13
22	07:54		07:15	07:26	06:30		05:51	05:40
	17:20		18:01	19:38	20:16		20:51	21:13
23	07:53		07:13	07:24	06:29		05:50	05:41
	17:21		18:03	19:39	20:17		20:52	21:13
24	07:52		07:12	07:22	06:27		05:49	05:41
	17:22		18:04	19:40	20:18		20:53	21:13
25	07:51		07:10	07:20	06:26		05:49	05:41
	17:24		18:05	19:41	20:20		20:54	21:13
26	07:50		07:08	07:18	06:24		05:48	05:42
	17:25		18:07	19:43	20:21		20:55	21:13
27	07:49		07:07	07:16	06:23		05:47	05:42
	17:26		18:08	19:44	20:22		20:56	21:13
28	07:48		07:05	07:15	06:21		05:46	05:42
	17:28		18:09	19:45	20:23		20:57	21:13
29	07:47			07:13	06:20		05:46	05:43
	17:29			19:46	20:25		20:58	21:13
30	07:46			07:11	06:18		05:45	05:43
	17:31			19:48	20:26		20:59	21:13
31	07:45			07:09	19:23 (50)		05:44	
	17:32			19:49	4 19:27 (50)		21:00	
Potential sun hours	288	292	369	403	458	464		
Total, worst case	405			192				
Sun reduction	0.57			0.61				
Oper. time red.	0.98			0.98				
Wind dir. red.	0.56			0.61				
Total reduction	0.31			0.36				
Total, real	125		1	69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H175 - H175

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:13	06:11 20:52	06:47 20:04	19:17 (50) 19:35 (50)	07:22 19:09	07:01 17:15
2	05:44 21:13	06:12 20:51	06:48 20:02	19:17 (50) 19:37 (50)	07:23 19:07	07:03 17:14
3	05:45 21:13	06:13 20:49	06:49 20:01	19:16 (50) 19:36 (50)	07:24 19:05	07:04 17:12
4	05:46 21:13	06:14 20:48	06:50 19:59	19:15 (50) 19:34 (50)	07:25 19:03	07:05 17:11
5	05:46 21:12	06:15 20:47	06:51 19:57	19:14 (50) 19:32 (50)	07:27 19:01	07:07 17:10
6	05:47 21:12	06:17 20:46	06:52 19:55	19:13 (50) 19:31 (50)	07:28 18:58	07:08 17:08
7	05:47 21:12	06:18 20:44	06:54 19:53	19:13 (50) 19:29 (50)	07:29 18:56	07:09 17:07
8	05:48 21:11	06:19 20:43	06:55 19:52	19:13 (50) 19:27 (50)	07:30 18:54	07:11 17:06
9	05:49 21:11	06:20 20:41	06:56 19:50	19:13 (50) 19:25 (50)	07:32 18:52	07:12 17:05
10	05:50 21:11	06:21 20:40	06:57 19:48	19:13 (50) 19:23 (50)	07:33 18:51	07:13 17:04
11	05:50 21:10	06:22 20:39	06:58 19:46	19:14 (50) 19:22 (50)	07:34 18:49	07:15 17:02
12	05:51 21:10	06:23 20:37	06:59 19:44	19:15 (50) 19:20 (50)	07:35 18:47	07:16 17:01
13	05:52 21:09	06:25 20:36	07:01 19:42	19:17 (50) 19:18 (50)	07:37 18:45	07:17 17:00
14	05:53 21:08	06:26 20:34	07:02 19:40	07:38 18:44	07:19 16:59	07:53 16:46
15	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:21 16:57	07:54 16:46
17	05:56 21:06	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	05:57 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:47
19	05:57 21:05	06:32 20:26	07:08 19:31	07:44 18:35	07:25 16:54	07:56 16:47
20	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33	07:27 16:54	07:57 16:47
21	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	06:00 21:02	06:35 20:21	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	06:01 21:01	06:36 20:20	07:12 19:24	07:49 18:29	07:31 16:51	07:59 16:49
24	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:51	07:59 16:49
25	06:03 21:00	06:39 20:16	07:15 19:20	07:52 18:25	07:33 16:50	07:59 16:50
26	06:04 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:51
27	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:35 16:49	08:00 16:51
28	06:07 20:56	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:00 16:52
29	06:08 20:55	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:53
30	06:09 20:54	06:44 20:08	19:22 (50) 19:32 (50)	07:21 19:11	07:59 18:18	15:56 (51) 16:20 (51)
31	06:10 20:53	06:46 20:06	19:19 (50) 19:34 (50)	08:00 18:17	08:00 16:47	08:01 16:54
Potential sun hours	470	435	377	341	289	276
Total, worst case		25	179		179	529
Sun reduction		0.74	0.69		0.50	0.49
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.61	0.61		0.56	0.56
Total reduction		0.44	0.41		0.27	0.27
Total, real		11	73		49	141

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H198 - H198

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December							
1	08:01	16:12 (50)	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40	15:56 (50)					
	16:56	16	16:28 (50)	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47	24	16:20 (50)			
2	08:01	16:12 (50)	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41	15:58 (50)					
	16:56	17	16:29 (50)	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47	22	16:20 (50)			
3	08:01	16:12 (50)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42	15:58 (50)					
	16:57	18	16:30 (50)	17:36	18:13	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:12	16:46	22	16:20 (50)			
4	08:01	16:12 (50)	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44	15:58 (50)					
	16:58	18	16:30 (50)	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46	21	16:19 (50)			
5	08:01	16:12 (50)	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45	15:58 (50)					
	16:59	19	16:31 (50)	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46	21	16:19 (50)			
6	08:01	16:12 (50)	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:52	07:28	07:08	07:46	15:59 (50)					
	17:00	19	16:32 (50)	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:46	19	16:18 (50)			
7	08:01	16:13 (50)	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47	15:59 (50)					
	17:01	21	16:34 (50)	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45	19	16:18 (50)			
8	08:01	16:14 (50)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48	16:00 (50)					
	17:02	21	16:35 (50)	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45	18	16:18 (50)			
9	08:00	16:14 (50)	07:34	07:49	06:53	06:05	05:41	05:49	06:20	06:56	07:32	07:12	07:49	16:00 (50)					
	17:04	21	16:35 (50)	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45	18	16:18 (50)			
10	08:00	16:15 (50)	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50	16:01 (50)					
	17:05	22	16:37 (50)	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45	17	16:18 (50)			
11	08:00	16:14 (50)	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50	16:02 (50)					
	17:06	24	16:38 (50)	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45	16	16:18 (50)			
12	08:00	16:15 (50)	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51	16:02 (50)					
	17:07	24	16:39 (50)	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45	16	16:18 (50)			
13	07:59	16:15 (50)	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52	16:03 (50)					
	17:08	24	16:39 (50)	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45	15	16:18 (50)			
14	07:59	16:17 (50)	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53	16:03 (50)					
	17:09	22	16:39 (50)	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:44	16:59	16:46	14	16:17 (50)			
15	07:58	16:17 (50)	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54	16:04 (50)					
	17:11	22	16:39 (50)	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46	14	16:18 (50)			
16	07:58	16:18 (50)	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54	16:04 (50)					
	17:12	22	16:40 (50)	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46	14	16:18 (50)			
17	07:57	16:18 (50)	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55	16:05 (50)					
	17:13	21	16:39 (50)	17:56	19:31	20:10	20:46	21:11	21:06	20:30	19:35	18:38	16:56	16:46	14	16:19 (50)			
18	07:56	16:19 (50)	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56	16:05 (50)					
	17:14	20	16:39 (50)	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47	13	16:18 (50)			
19	07:56	16:21 (50)	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:25	07:56	16:06 (50)					
	17:16	18	16:39 (50)	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	7	16:02 (50)	07:56	16:47	13	16:19 (50)
20	07:55	16:22 (50)	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57	16:00 (50)	07:57	16:06 (50)			
	17:17	16	16:38 (50)	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	11	16:11 (50)	16:47	13	16:19 (50)	
21	07:54	16:23 (50)	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58	16:07 (50)					
	17:18	14	16:37 (50)	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	14	16:13 (50)	16:48	13	16:20 (50)	
22	07:54	16:25 (50)	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58	16:07 (50)					
	17:20	11	16:36 (50)	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16	16:14 (50)	16:48	13	16:20 (50)	
23	07:53	16:27 (50)	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:57	16:08 (50)					
	17:21	7	16:34 (50)	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	18	16:15 (50)	16:49	13	16:21 (50)	
24	07:52	16:28 (50)	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:57	16:08 (50)					
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	20	16:17 (50)	16:49	13	16:21 (50)			
25	07:51	16:29 (50)	07:10	07:20	06:26	05:49	05:41	06:03	06:38	07:15	07:52	07:33	07:57	16:08 (50)					
	17:24	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	20	16:17 (50)	16:50	13	16:21 (50)			
26	07:50	16:30 (50)	07:08	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	07:58	16:09 (50)					
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	22	16:18 (50)	16:51	14	16:23 (50)			
27	07:49	16:31 (50)	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	07:59	16:09 (50)					
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	22	16:18 (50)	16:51	14	16:23 (50)			
28	07:48	16:32 (50)	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	07:59	16:10 (50)					
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	22	16:19 (50)	16:52	14	16:24 (50)			
29	07:47	16:33 (50)	07:03	07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	07:59	16:10 (50)					
	17:29	19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	17:24	16:48	24	16:20 (50)	16:53	14	16:24 (50)			
30	07:46	16:34 (50)	07:01	07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	07:59	16:11 (50)					
	17:31	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	17:24	16:47	24	16:20 (50)	16:54	15	16:26 (50)			
31	07:45	16:35 (50)	07:00	07:09	06:15	05:44	05:40	06:10	06:46	07:22	07:59	07:39	07:59	16:11 (50)					
	17:32	19:49	20:27	20:59	21:00	20:53	20:06	19:09	18:17	17:23	16:46	16	16:27 (50)						
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	495						
Total, worst case	437										220		495						
Sun reduction	0.57										0.50		0.49						
Oper. time red.	0.98										0.98		0.98						
Wind dir. red.	0.56										0.56		0.56						
Total reduction	0.31										0.27		0.27						
Total, real	136										60		132						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H199 - H199

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
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	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
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	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
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	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:25	07:57
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H200 - H200

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:46 21:13	06:14 20:48	06:50 19:59	07:26 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:16 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:10 20:33	05:42 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:48 21:12	06:18 20:44	06:54 19:54	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:03	07:36 17:43	07:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:04	07:34 17:45	07:50 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:47	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:51 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:03	07:51 16:45
12	08:00 17:07	07:30 17:49	07:44 19:25	06:48 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:24 20:37	07:00 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:30 20:28	07:07 19:33	07:43 18:37	07:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:36 20:12	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:27	07:08 19:31	07:44 18:35	07:26 16:55	07:57 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:46 18:33	07:27 16:54	07:57 16:47
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:29	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	05:49 20:54	05:41 21:13	06:02 21:01	06:37 20:18	07:14 19:22	07:51 18:27	07:32 16:51	07:59 16:49
25	07:51 17:24	07:10 18:05	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:13	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:33 16:50	08:00 16:50
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28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:24	05:46 20:57	05:42 21:14	06:07 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
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30	07:46 17:31	07:03 19:48	07:11 20:26	06:18 20:59	05:45 20:59	05:43 21:14	06:09 20:54	06:44 20:08	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:54
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Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H201 - H201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01 16:56	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	19:23 (48) 19:40 (48)	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:28	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:03	19:23 (48) 19:38 (48)	07:23 19:07	07:03 17:14	07:42 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	19:22 (48) 19:36 (48)	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	19:29 (48) 19:32 (48)	06:12 20:31	05:42 21:04	06:14 20:48	06:50 19:59	19:22 (48) 19:34 (48)	07:26 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	19:27 (48) 19:33 (48)	06:11 20:32	05:42 21:04	06:16 20:47	06:51 19:57	19:21 (48) 19:32 (48)	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	19:25 (48) 19:34 (48)	06:10 20:33	05:42 21:05	06:17 20:46	06:53 19:55	19:22 (48) 19:31 (48)	07:28 19:00	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:56 19:58	19:25 (48) 19:36 (48)	06:08 20:34	05:41 21:06	06:18 20:44	06:54 19:54	19:22 (48) 19:29 (48)	07:29 18:56	07:10 17:07	07:47 16:46
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17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:07	06:29 20:30	07:05 19:35	06:29 18:39	06:29 16:56	07:55 16:46	
18	07:57 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:31 20:28	07:07 19:33	06:31 18:37	06:31 16:55	07:56 16:47	
19	07:56 17:16	07:20 17:59	07:31 19:34	06:36 20:13	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:27	07:08 19:31	06:32 18:44	06:32 16:55	07:57 16:47	
20	07:55 17:17	07:18 18:00	07:30 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:59 21:04	06:33 20:25	07:09 19:29	06:33 18:34	06:33 16:54	07:57 16:47	
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:50	05:40 21:13	06:00 21:03	06:34 20:23	07:10 19:28	06:34 18:32	06:34 16:53	07:58 16:48	
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	05:51 20:51	05:40 21:13	06:01 21:03	06:35 20:22	07:11 19:26	06:35 18:30	06:35 16:52	07:58 16:48	
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:17	05:50 20:53	05:41 21:13	06:02 21:02	06:36 20:20	07:12 19:24	06:36 18:29	06:36 16:51	07:59 16:49	
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	05:50 20:54	05:41 21:13	06:03 21:01	06:38 20:18	07:14 19:22	06:03 18:27	06:38 16:51	07:59 16:49	
25	07:51 17:24	07:10 18:05	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:13	06:04 21:00	06:39 20:17	07:15 19:20	06:04 18:26	06:39 16:50	08:00 16:50	
26	07:50 17:25	07:09 18:07	07:18 19:43	06:24 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	06:05 18:24	06:40 16:50	08:00 16:51	
27	07:49 17:27	07:07 18:08	07:17 19:44	06:23 20:22	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:13	19:31 (48) 19:16	07:17 19:28 (48)	07:17 18:23	16:49 16:51	
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:24	05:46 20:57	05:42 21:14	06:07 20:57	06:42 20:11	07:18 19:14	19:39 (48) 19:41 (48)	07:18 19:14	08:01 16:48	
29	07:47 17:29		07:13 19:47	06:20 20:25	05:46 20:58	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	19:26 (48) 19:42 (48)	07:20 19:13	08:01 16:48	
30	07:46 17:31		07:11 19:48	06:18 20:26	05:45 20:59	05:43 21:14	06:09 20:54	06:45 20:08	07:21 19:11	19:25 (48) 19:43 (48)	07:21 19:11	08:01 16:54	
31	07:45 17:32		07:09 19:49		05:45 21:00		06:10 20:53	06:46 20:06	19:23 (48) 19:41 (48)		08:00 18:17	08:01 16:55	
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case				158				73	90				
Sun reduction				0.61				0.74	0.69				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.61				0.61	0.61				
Total reduction				0.37				0.44	0.41				
Total, real				58				32	37				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H202 - H202

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:00	16:45
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53	16:53
30	07:46	07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:39	08:01	08:01
	17:31	19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54	16:54
31	07:45	07:09	07:19	06:19	05:45	06:10	06:46	07:22	07:59	07:39	08:01	08:01
	17:32	19:49	20:27	21:00	21:15	20:53	20:06	19:09	18:16	16:46	16:55	16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												19
Sun reduction												0.49
Oper. time red.												0.98
Wind dir. red.												0.55
Total reduction												0.26
Total, real												5

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H203 - H203

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:01	07:44	07:04	07:07	06:17	05:44	20:14 (48)	05:44	20:20 (48)	06:11	06:47	07:22	07:01	07:40	
	16:56	17:33	18:11	19:50	20:27	21:01	20:35 (48)	21:13	25	20:45 (48)	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:43	20:14 (48)	05:44	20:21 (48)	06:12	06:48	07:23	07:03	07:42	
	16:57	17:35	18:12	19:52	20:28	21:02	20:36 (48)	21:13	25	20:46 (48)	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	20:14 (48)	05:45	20:20 (48)	06:13	06:49	07:24	07:04	07:43	
	16:58	17:36	18:13	19:53	20:30	21:03	20:36 (48)	21:13	25	20:45 (48)	20:50	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	20:14 (48)	05:46	20:21 (48)	06:14	06:50	07:26	07:05	07:44	
	16:58	17:38	18:15	19:54	20:31	21:04	20:37 (48)	21:13	25	20:46 (48)	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	20:15 (48)	05:46	20:21 (48)	06:16	06:51	07:27	07:07	07:45	
	16:59	17:39	18:16	19:55	20:32	21:04	20:38 (48)	21:13	25	20:46 (48)	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	20:14 (48)	05:47	20:21 (48)	06:17	06:53	07:28	07:08	07:46	
	17:00	17:41	18:17	19:57	20:33	21:05	20:38 (48)	21:12	24	20:45 (48)	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	20:15 (48)	05:48	20:21 (48)	06:18	06:54	07:29	07:10	07:47	
	17:02	17:42	18:19	19:58	20:34	21:06	20:39 (48)	21:12	24	20:45 (48)	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	20:15 (48)	05:48	20:22 (48)	06:19	06:55	07:30	07:11	07:48	
	17:03	17:43	18:20	19:59	20:36	21:07	20:40 (48)	21:12	23	20:45 (48)	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:50	06:53	06:06	05:41	20:15 (48)	05:49	20:21 (48)	06:20	06:56	07:32	07:12	07:49	
	17:04	17:45	19:21	20:00	20:37	21:07	20:40 (48)	21:11	23	20:44 (48)	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	20:15 (48)	05:50	20:21 (48)	06:21	06:57	07:33	07:14	07:50	
	17:05	17:46	19:23	20:01	20:38	21:08	20:41 (48)	21:11	23	20:44 (48)	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	20:16 (48)	05:51	20:22 (48)	06:22	06:58	07:34	07:15	07:51	
	17:06	17:48	19:24	20:03	20:39	21:08	20:41 (48)	21:10	21	20:43 (48)	20:39	19:46	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	20:16 (48)	05:51	20:22 (48)	06:24	07:00	07:35	07:16	07:51	
	17:07	17:49	19:25	20:04	20:40	21:09	20:41 (48)	21:10	21	20:43 (48)	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	20:17 (48)	05:52	20:22 (48)	06:25	07:01	07:37	07:18	07:52	
	17:08	17:50	19:27	20:05	20:42	21:10	20:41 (48)	21:09	20	20:42 (48)	20:36	19:43	18:45	17:00	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	20:17 (48)	05:53	20:22 (48)	06:26	07:02	07:38	07:19	07:53	
	17:10	17:52	19:28	20:06	20:43	21:10	20:42 (48)	21:09	19	20:41 (48)	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	20:17 (48)	05:54	20:22 (48)	06:27	07:03	07:39	07:20	07:54	
	17:11	17:53	19:29	20:08	20:44	21:11	20:42 (48)	21:08	19	20:41 (48)	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	20:18 (48)	05:55	20:23 (48)	06:28	07:04	07:40	07:22	07:55	
	17:12	17:55	19:30	20:09	20:45	21:11	20:42 (48)	21:07	18	20:41 (48)	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	20:18 (48)	05:56	20:23 (48)	06:29	07:05	07:42	07:23	07:55	
	17:13	17:56	19:32	20:10	20:46	21:11	20:42 (48)	21:07	17	20:40 (48)	20:30	19:35	18:39	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	20:18 (48)	05:57	20:24 (48)	06:31	07:07	07:43	07:24	07:56	
	17:15	17:57	19:33	20:11	20:47	21:12	20:42 (48)	21:06	15	20:39 (48)	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	20:18 (48)	05:58	20:25 (48)	06:32	07:08	07:44	07:26	07:57	
	17:16	17:59	19:34	20:13	20:48	21:12	20:42 (48)	21:05	14	20:39 (48)	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	20:18 (48)	05:59	20:24 (48)	06:33	07:09	07:46	07:27	07:57	
	17:17	18:00	19:35	20:14	20:49	21:12	20:42 (48)	21:04	13	20:37 (48)	20:25	19:29	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	20:17 (48)	06:00	20:25 (48)	06:34	07:10	07:47	07:28	07:58	
	17:18	18:00	19:37	20:15	20:50	21:13	20:43 (48)	21:03	11	20:36 (48)	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	20:19 (48)	06:01	20:26 (48)	06:35	07:11	07:48	07:29	07:58	
	17:20	18:01	19:38	20:16	20:51	21:13	20:43 (48)	21:03	10	20:36 (48)	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	20:15 (48)	06:02	20:27 (48)	06:36	07:12	07:49	07:31	07:59	
	17:21	18:03	19:39	20:17	20:53	21:13	20:43 (48)	21:02	8	20:35 (48)	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	20:19 (48)	06:03	20:28 (48)	06:38	07:14	07:51	07:32	07:59	
	17:22	18:04	19:40	20:19	20:54	21:13	20:43 (48)	21:01	6	20:34 (48)	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	20:20 (48)	06:04	20:29 (48)	06:39	07:15	07:52	07:33	08:00	
	17:24	18:05	19:42	20:20	20:55	21:13	20:44 (48)	21:00	4	20:33 (48)	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	20:20 (48)	06:05	20:31 (48)	06:40	07:16	07:53	07:34	08:00	
	17:25	18:07	19:43	20:21	20:56	21:14	20:44 (48)	20:59	1	20:32 (48)	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	20:14 (48)	06:06	20:19 (48)	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:44 (48)	20:58	20:13	19:16	18:23	16:49	16:51	16:51	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	20:20 (48)	06:07	06:42	07:18	07:56	07:37	08:01	16:52	16:52
	17:28	18:10	19:45	20:24	20:57	21:14	20:45 (48)	20:57	20:11	19:14	18:21	16:48	16:48	16:52	16:52
29	07:47		07:13	06:20	05:46	05:43	20:20 (48)	06:08	06:43	07:20	07:57	07:38	08:01	16:53	16:53
	17:29		19:47	20:25	20:58	21:14	20:44 (48)	20:56	20:10	19:13	18:20	16:48	16:48	16:53	16:53
30	07:46		07:11	06:18	05:45	05:43	20:20 (48)	06:09	06:45	07:21	07:59	07:39	08:01	16:54	16:54
	17:31		19:48	20:26	20:59	21:14	20:45 (48)	20:54	20:08	19:11	18:18	16:48	16:48	16:54	16:54
31	07:45		07:09		05:45			06:10		06:46		08:00		08:01	08:01
	17:32		19:49		21:00	21:00	20:35 (48)	20:53		20:06		18:17		16:55	16:55
Potential sun hours	287	292	369	403	458	464		470	435	377	341	289		276	276
Total, worst case					186	722		459							
Sun reduction					0.65	0.70		0.76							
Oper. time red.					0.98	0.98		0.98							
Wind dir. red.					0.67	0.67		0.67							
Total reduction					0.43	0.46		0.50							
Total, real					79	332		229							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H204 - H204

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
949 364 341 374 484 625 1,208 924 579 685 870 1,170 8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December					
1	08:02	07:44	07:04	07:08	06:17	19:54 (47)	05:44	19:53 (47)	05:44	06:11	19:55 (47)	06:47	07:22	07:02	07:41		
	16:56	17:34	18:11	19:50	20:27	10	20:04 (47)	21:01	20:52	32	20:27 (47)	20:05	19:09	17:15	16:47		
2	08:02	07:43	07:02	07:06	06:15	19:51 (47)	05:44	19:55 (47)	05:45	06:12	19:55 (47)	06:48	07:23	07:03	07:42		
	16:57	17:35	18:12	19:52	20:29	14	20:05 (47)	21:02	20:51	30	20:25 (47)	20:03	19:07	17:14	16:47		
3	08:02	07:42	07:00	07:04	06:14	19:50 (47)	05:43	19:56 (47)	05:45	06:13	19:55 (47)	06:49	07:24	07:04	07:43		
	16:58	17:36	18:14	19:53	20:30	16	20:06 (47)	21:03	20:50	29	20:24 (47)	20:01	19:05	17:13	16:47		
4	08:02	07:41	06:59	07:02	06:13	19:49 (47)	05:43	19:58 (47)	05:46	06:15	19:55 (47)	06:50	07:26	07:06	07:44		
	16:59	17:38	18:15	19:54	20:31	19	20:08 (47)	21:04	20:48	28	20:23 (47)	19:59	19:03	17:11	16:46		
5	08:01	07:40	06:57	07:00	06:11	19:47 (47)	05:42	20:02 (47)	05:46	06:16	19:56 (47)	06:52	07:27	07:07	07:45		
	17:00	17:39	18:16	19:55	20:32	21	20:08 (47)	21:04	20:47	25	20:21 (47)	19:57	19:02	17:10	16:46		
6	08:01	07:38	06:55	06:58	06:10	19:47 (47)	05:42		05:47	06:17	19:56 (47)	06:53	07:28	07:08	07:46		
	17:01	17:41	18:18	19:57	20:33	23	20:10 (47)	21:05	21:13	24	20:20 (47)	19:56	19:00	17:09	16:46		
7	08:01	07:37	06:53	06:57	06:08	19:46 (47)	05:41		05:48	06:18	19:57 (47)	06:54	07:29	07:10	07:47		
	17:02	17:42	18:19	19:58	20:35	25	20:11 (47)	21:06	21:12	22	20:19 (47)	19:54	18:56	17:07	16:46		
8	08:01	07:36	07:51	06:55	06:07	19:45 (47)	05:41		05:48	20:06 (47)	19:57 (47)	06:55	07:31	07:11	07:48		
	17:03	17:43	18:20	19:59	20:36	26	20:11 (47)	21:07	21:12	7	20:13 (47)	20:43	19:52	18:54	17:06	16:46	
9	08:01	07:35	07:50	06:53	06:06	19:45 (47)	05:41		05:49	20:04 (47)	19:58 (47)	06:20	19:58 (47)	07:32	07:12	07:49	
	17:04	17:45	18:21	20:00	20:37	28	20:13 (47)	21:07	21:11	10	20:14 (47)	20:42	19:50	18:53	17:05	16:45	
10	08:00	07:33	07:48	06:51	06:05	19:44 (47)	05:41		05:50	20:03 (47)	19:59 (47)	06:21	19:59 (47)	07:33	07:14	07:50	
	17:05	17:46	18:23	20:02	20:38	30	20:14 (47)	21:08	21:11	13	20:16 (47)	20:40	19:48	18:51	17:04	16:45	
11	08:00	07:32	07:46	06:50	06:03	19:44 (47)	05:40		05:51	20:02 (47)	19:58 (47)	06:23	20:01 (47)	06:59	07:34	07:15	07:51
	17:06	17:48	18:24	20:03	20:39	31	20:15 (47)	21:09	21:10	15	20:17 (47)	20:39	19:46	18:49	17:03	16:45	
12	08:00	07:30	07:44	06:48	06:02	19:44 (47)	05:40		05:52	20:02 (47)	19:56 (47)	06:24	20:04 (47)	07:00	07:36	07:16	07:52
	17:07	17:49	18:25	20:04	20:41	32	20:16 (47)	21:09	21:10	17	20:19 (47)	20:37	19:44	18:47	17:02	16:46	
13	07:59	07:29	07:42	06:46	06:01	19:44 (47)	05:40		05:52	20:00 (47)	19:56 (47)	06:25	20:09 (47)	07:01	07:37	07:18	07:52
	17:08	17:50	18:27	20:05	20:42	33	20:17 (47)	21:10	21:09	19	20:19 (47)	20:36	19:43	18:46	17:01	16:46	
14	07:59	07:28	07:41	06:44	06:00	19:44 (47)	05:40		05:53	19:59 (47)	19:59 (47)	06:26	20:02	07:38	07:19	07:53	
	17:10	17:52	18:28	20:07	20:43	33	20:17 (47)	21:10	21:09	21	20:20 (47)	20:34	19:41	18:44	16:59	16:46	
15	07:58	07:26	07:39	06:43	05:59	19:44 (47)	05:40		05:54	19:59 (47)	19:59 (47)	06:27	20:03	07:39	07:20	07:54	
	17:11	17:53	18:29	20:08	20:44	33	20:17 (47)	21:11	21:08	22	20:21 (47)	20:33	19:39	18:42	16:58	16:46	
16	07:58	07:25	07:37	06:41	05:57	19:43 (47)	05:40		05:55	19:59 (47)	19:59 (47)	06:28	20:04	07:41	07:22	07:55	
	17:12	17:55	18:30	20:09	20:45	33	20:16 (47)	21:11	21:07	23	20:22 (47)	20:31	19:37	18:40	16:57	16:46	
17	07:57	07:23	07:35	06:39	05:56	19:44 (47)	05:40		05:56	19:58 (47)	19:58 (47)	06:30	20:06	07:42	07:23	07:55	
	17:13	17:56	18:32	20:10	20:46	32	20:16 (47)	21:12	21:07	25	20:23 (47)	20:30	19:35	18:39	16:57	16:47	
18	07:57	07:22	07:33	06:37	05:55	19:45 (47)	05:40		05:57	19:58 (47)	19:58 (47)	06:31	20:07	07:43	07:24	07:56	
	17:15	17:57	18:33	20:11	20:47	32	20:17 (47)	21:12	21:06	26	20:24 (47)	20:28	19:33	18:37	16:56	16:47	
19	07:56	07:20	07:31	06:36	05:54	19:45 (47)	05:40		05:58	19:57 (47)	19:57 (47)	06:32	20:08	07:44	07:26	07:57	
	17:16	17:59	18:34	20:13	20:48	32	20:17 (47)	21:12	21:05	28	20:25 (47)	20:27	19:31	18:35	16:55	16:47	
20	07:55	07:18	07:30	06:34	05:53	19:45 (47)	05:40		05:59	19:57 (47)	19:57 (47)	06:33	20:09	07:46	07:27	07:57	
	17:17	18:00	18:36	20:14	20:49	32	20:17 (47)	21:13	21:04	28	20:25 (47)	20:25	19:30	18:34	16:54	16:48	
21	07:55	07:17	07:28	06:32	05:52	19:46 (47)	05:40		06:00	19:57 (47)	19:57 (47)	06:34	20:10	07:47	07:28	07:58	
	17:19	18:00	18:37	20:15	20:51	30	20:16 (47)	21:13	21:04	29	20:26 (47)	20:23	19:28	18:32	16:53	16:48	
22	07:54	07:15	07:26	06:31	05:51	19:46 (47)	05:41		06:01	19:55 (47)	19:55 (47)	06:35	20:11	07:48	07:30	07:58	
	17:20	18:02	18:38	20:16	20:52	30	20:16 (47)	21:13	21:03	30	20:25 (47)	20:22	19:26	18:30	16:52	16:49	
23	07:53	07:14	07:24	06:29	05:51	19:46 (47)	05:41		06:02	19:55 (47)	19:55 (47)	06:36	20:07	07:50	07:31	07:59	
	17:21	18:03	18:39	20:18	20:53	29	20:15 (47)	21:13	21:02	31	20:26 (47)	20:20	19:24	18:29	16:52	16:49	
24	07:52	07:12	07:22	06:28	05:50	19:47 (47)	05:41		06:03	19:55 (47)	19:55 (47)	06:38	20:14	07:51	07:32	07:59	
	17:23	18:04	18:41	20:19	20:54	27	20:14 (47)	21:13	21:01	31	20:26 (47)	20:18	19:22	18:27	16:51	16:50	
25	07:51	07:10	07:20	06:26	05:49	19:48 (47)	05:41		06:04	19:54 (47)	19:54 (47)	06:39	20:07	07:52	07:33	08:00	
	17:24	18:06	18:42	20:20	20:55	27	20:15 (47)	21:14	21:00	33	20:27 (47)	20:17	19:20	18:26	16:50	16:50	
26	07:51	07:09	07:19	06:24	05:48	19:48 (47)	05:42		06:05	19:54 (47)	19:54 (47)	06:40	20:16	07:54	07:35	08:00	
	17:25	18:07	18:43	20:21	20:56	26	20:14 (47)	21:14	20:59	33	20:27 (47)	20:15	19:18	18:24	16:50	16:51	
27	07:50	07:07	07:17	06:23	05:47	19:49 (47)	05:42		06:06	19:54 (47)	19:54 (47)	06:41	20:17	07:55	07:36	08:00	
	17:27	18:08	18:44	20:22	20:57	24	20:13 (47)	21:14	20:58	33	20:27 (47)	20:13	19:16	18:23	16:49	16:52	
28	07:49	07:05	07:15	06:21	05:47	19:50 (47)	05:43		06:07	19:54 (47)	19:54 (47)	06:42	20:18	07:56	07:37	08:01	
	17:28	18:10	18:46	20:24	20:58	23	20:13 (47)	21:14	20:57	33	20:27 (47)	20:12	19:15	18:21	16:49	16:52	
29	07:48		07:13	06:20	05:46	19:51 (47)	05:43		06:08	19:54 (47)	19:54 (47)	06:43	20:20	07:58	07:38	08:01	
	17:29		18:05	20:25	20:59	21	20:12 (47)	21:14	20:56	33	20:27 (47)	20:10	19:13	18:20	16:48	16:53	
30	07:47		07:11	06:18	05:45	19:51 (47)	05:44		06:09	19:55 (47)	19:55 (47)	06:45	20:21	07:59	07:39	08:01	
	17:31		18:07	20:26	5	20:03 (47)	21:14		20:55	33	20:28 (47)	20:08	19:11	18:18	16:54	16:48	
31	07:45		07:09		05:45	19:53 (47)			06:10		19:55 (47)	06:46		08:00		08:01	
	17:32		18:09		21:00	18	20:11 (47)		20:53	33	20:28 (47)	20:06		18:17		16:55	
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276					
Total, worst case				5	810	53	606	265									
Sun reduction				0.61	0.65	0.70	0.76	0.74									
Oper. time red.				0.98	0.98	0.98	0.98	0.98									
Wind dir. red.				0.64	0.64	0.64	0.64	0.64									
Total reduction				0.38	0.41	0.44	0.48	0.47									
Total, real				2	331	23	290	123									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H206 - H206

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:34	07:04 18:11	07:24 (47) 07:08	07:08 08:31 (46)	06:17 20:27
2	08:02 16:57	07:43 17:35	07:02 18:12	07:23 (47) 07:06	07:06 08:31 (46)	06:15 20:29
3	08:02 16:58	07:42 17:37	07:00 18:14	07:22 (47) 07:04	07:04 08:31 (46)	06:14 20:30
4	08:02 16:59	07:41 17:38	06:59 18:15	07:23 (47) 07:02	07:02 08:30 (46)	06:13 20:31
5	08:02 17:00	07:40 17:39	06:57 18:16	07:24 (47) 07:00	07:00 08:30 (46)	06:11 20:32
6	08:01 17:01	07:39 17:41	06:55 18:18	07:27 (47) 06:59	06:59 08:30 (46)	06:10 20:34
7	08:01 17:02	07:37 17:42	06:53 18:19	07:32 (47) 07:33 (47)	06:57 19:58	06:08 08:29 (46)
8	08:01 17:03	07:36 17:44	07:52 18:20	06:55 19:59	06:07 08:29 (46)	05:41 20:36
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	06:06 08:28 (46)	05:41 20:37
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	06:05 08:27 (46)	05:41 20:38
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 08:27 (46)	05:40 20:39
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	06:02 08:26 (46)	05:40 20:41
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:05	06:01 08:25 (46)	05:40 20:42
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:00 08:25 (46)	05:40 20:43
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	05:59 08:23 (46)	05:40 20:44
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 08:22 (46)	05:40 20:45
17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 07:56 (46)	05:56 20:10	05:40 20:46
18	07:57 17:15	07:22 17:57	07:33 19:33	06:38 08:12 (46)	05:55 20:11	05:40 20:47
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 08:20 (46)	05:54 20:13	05:40 20:49
20	07:56 17:17	07:19 18:00	07:30 07:39 (47)	06:34 19:36	05:53 08:22 (46)	05:40 20:14
21	07:55 17:19	07:17 18:00	07:28 07:44 (47)	06:33 08:24 (46)	05:52 20:15	05:41 20:51
22	07:54 17:20	07:15 18:02	07:26 07:45 (47)	06:31 08:25 (46)	05:52 20:16	05:41 20:52
23	07:53 17:21	07:14 18:03	07:24 07:46 (47)	06:29 08:26 (46)	05:51 20:18	05:41 20:53
24	07:52 17:23	07:12 18:04	07:22 07:47 (47)	06:28 08:27 (46)	05:50 20:19	05:41 20:54
25	07:52 17:24	07:11 18:06	07:21 07:47 (47)	06:26 08:29 (46)	05:49 20:20	05:42 20:55
26	07:51 17:25	07:09 18:07	07:19 07:47 (47)	06:24 08:29 (46)	05:48 20:21	05:42 20:56
27	07:50 17:27	07:07 18:08	07:17 07:47 (47)	06:23 08:30 (46)	05:47 20:23	05:42 20:57
28	07:49 17:28	07:05 18:10	07:15 07:46 (47)	06:21 08:30 (46)	05:47 20:24	05:43 20:58
29	07:48 17:30		07:13 19:47	06:20 08:30 (46)	05:46 20:25	05:43 21:14
30	07:47 17:31		07:11 19:48	06:18 08:30 (46)	05:45 20:26	05:44 21:14
31	07:46 17:32		07:09 19:49	06:16 08:31 (46)	05:45 21:00	05:44 21:14
Potential sun hours	287	292	369	403	458	464
Total, worst case		115	759	1412		
Sun reduction		0.59	0.59	0.61		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.63	0.60	0.60		
Total reduction		0.36	0.35	0.36		
Total, real		42	263	503		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H206 - H206

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	07:25 (46) 08:26 (46)	07:22 17:15	07:02 16:47
2	05:45 21:14	06:12 20:51	06:48 20:03	07:24 (46) 08:26 (46)	07:23 17:14	07:03 16:47
3	05:45 21:13	06:14 20:50	06:49 20:01	07:23 (46) 08:26 (46)	07:25 19:05	07:04 17:13
4	05:46 21:13	06:15 20:49	06:51 19:59	07:23 (46) 08:26 (46)	07:26 19:04	07:06 17:11
5	05:46 21:13	06:16 20:47	06:52 19:57	07:22 (46) 08:25 (46)	07:27 19:02	07:07 17:10
6	05:47 21:13	06:17 20:46	06:53 19:56	07:22 (46) 08:25 (46)	07:28 19:00	07:08 17:09
7	05:48 21:12	06:18 20:45	06:54 19:54	07:22 (46) 08:26 (46)	07:29 18:56	07:10 17:08
8	05:49 21:12	06:19 20:43	06:55 19:52	07:22 (46) 08:25 (46)	07:31 18:54	07:11 17:06
9	05:49 21:12	06:20 20:42	06:56 19:50	07:22 (46) 08:25 (46)	07:32 18:53	07:12 17:05
10	05:50 21:11	06:22 20:40	06:58 19:48	07:21 (46) 08:24 (46)	07:33 18:51	07:14 17:04
11	05:51 21:11	06:23 20:39	06:59 19:46	07:21 (46) 08:23 (46)	07:34 18:49	07:15 17:03
12	05:52 21:10	06:24 20:38	07:00 19:45	07:21 (46) 08:22 (46)	07:36 18:47	07:17 17:02
13	05:52 21:10	06:25 20:36	07:01 19:43	07:22 (46) 08:22 (46)	07:37 18:46	07:18 17:01
14	05:53 21:09	06:26 20:35	07:02 19:41	07:23 (46) 08:20 (46)	07:38 18:44	07:19 17:00
15	05:54 21:08	06:27 20:33	07:03 19:39	07:25 (46) 08:04 (46)	07:39 18:42	07:21 16:59
16	05:55 21:08	06:28 20:32	07:04 19:37	07:26 (46) 08:19 (46)	07:41 18:40	07:22 16:58
17	05:56 21:07	06:30 20:30	07:06 19:35	07:27 (46) 08:18 (46)	07:42 18:39	07:23 16:57
18	05:57 21:06	06:31 20:28	07:07 19:33	07:28 (46) 08:16 (46)	07:43 18:37	07:24 16:56
19	05:58 21:05	06:32 20:27	07:08 19:32	07:29 (46) 08:15 (46)	07:45 18:35	07:26 16:55
20	05:59 21:05	06:33 20:25	07:09 19:30	07:30 (46) 08:13 (46)	07:46 18:34	07:27 16:54
21	06:00 21:04	06:34 20:24	07:10 19:28	07:31 (46) 08:11 (46)	07:47 18:32	07:28 16:53
22	06:01 21:03	06:35 20:22	07:11 19:26	07:33 (46) 08:10 (46)	07:48 18:31	07:30 16:52
23	06:02 21:02	06:37 20:20	07:13 19:24	07:34 (46) 08:07 (46)	07:50 18:29	07:31 16:52
24	06:03 21:01	06:38 20:19	07:14 19:22	07:35 (46) 08:04 (46)	07:51 18:27	07:32 16:51
25	06:04 21:00	06:39 20:17	07:15 19:20	07:36 (46) 08:01 (46)	07:52 18:26	08:00 16:50
26	06:05 20:59	06:40 20:15	07:16 19:18	07:37 (46) 07:57 (46)	07:54 18:24	08:00 16:51
27	06:06 20:58	06:41 20:13	07:17 19:17	07:43 (46) 07:49 (46)	07:55 18:23	08:01 16:52
28	06:07 20:57	06:42 20:12	07:19 19:15	07:28 (46) 08:24 (46)	07:56 18:21	08:01 16:52
29	06:08 20:56	06:44 20:10	07:20 19:13	07:28 (46) 08:26 (46)	07:58 18:20	08:01 16:53
30	06:09 20:55	06:45 20:08	07:21 19:11	07:27 (46) 08:26 (46)	07:59 18:18	08:01 16:54
31	06:10 20:54	06:46 20:06	07:26 (46) 08:26 (46)	08:00 18:17	08:00 18:17	08:01 16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case		735	1354	237		
Sun reduction		0.74	0.69	0.63		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.60	0.60	0.63		
Total reduction		0.43	0.40	0.39		
Total, real		318	546	91		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H207 - H207

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H208 - H208

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H209 - H209

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:54	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H210 - H210

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H211 - H211

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H212 - H212

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H213 - H213

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H214 - H214

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H215 - H215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:12 20:53	06:47 20:05	07:22 19:09	07:02 17:16	07:41 16:48
2	08:02 16:57	07:44 17:35	07:02 18:13	07:06 19:52	06:16 20:29	05:44 21:02	05:45 21:14	06:13 20:51	06:48 20:03	07:24 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:42 17:37	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:50 20:01	07:25 19:06	07:05 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:55	06:13 20:31	05:43 21:04	05:46 21:13	06:15 20:49	06:51 20:00	07:26 19:04	07:06 17:12	07:44 16:47
5	08:02 17:00	07:40 17:40	06:57 18:17	07:01 19:56	06:11 20:33	05:42 21:05	05:47 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:29 19:00	07:09 17:09	07:46 16:46
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:09 20:35	05:42 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:08	07:47 16:46
8	08:01 17:03	07:36 17:44	07:52 18:21	06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:44	06:55 19:52	07:31 18:55	07:11 17:07	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:21 20:42	06:57 19:50	07:32 18:53	07:13 17:05	07:49 16:46
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11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:04 20:40	05:41 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:15 17:03	07:51 16:46
12	08:00 17:08	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	05:40 21:10	05:52 21:10	06:24 20:38	07:00 19:45	07:36 18:48	07:17 17:02	07:52 16:46
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14	07:59 17:10	07:28 17:52	07:41 19:28	06:45 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:19 17:00	07:54 16:46
15	07:59 17:11	07:26 17:54	07:39 19:30	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:09	06:28 20:33	07:04 19:39	07:40 18:42	07:21 16:59	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 20:45	05:40 21:12	05:55 21:08	06:29 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:55 16:47
17	07:58 17:14	07:23 17:56	07:36 19:32	06:39 20:11	05:57 20:47	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:36	07:42 18:39	07:23 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	05:56 20:48	05:40 21:12	05:57 21:06	06:31 20:29	07:07 19:34	07:44 18:37	07:25 16:56	07:57 16:47
19	07:57 17:16	07:20 17:59	07:32 19:35	06:36 20:13	05:55 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:36	07:26 16:55	07:57 16:47
20	07:56 17:18	07:19 18:00	07:30 19:36	06:34 20:14	05:54 20:50	05:41 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:16	05:53 20:51	05:41 21:13	06:00 21:04	06:34 20:24	07:11 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:52 20:52	05:41 21:14	06:01 21:03	06:36 20:22	07:12 19:26	07:49 18:31	07:30 16:53	07:59 16:49
23	07:54 17:22	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:20	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49
24	07:53 17:23	07:12 18:05	07:23 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:28	07:32 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:42 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:53 18:26	07:34 16:51	08:00 16:51
26	07:51 17:26	07:09 18:07	07:19 19:43	06:25 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:19	07:54 18:24	07:35 16:50	08:01 16:51
27	07:50 17:27	07:07 18:09	07:17 19:45	06:23 20:23	05:48 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:18 19:17	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:22 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:43 20:12	07:19 19:15	07:57 18:21	07:37 16:49	08:01 16:53
29	07:48 17:30	07:05 18:13	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:01 16:53
30	07:47 17:31	07:04 18:16	07:12 19:48	06:19 20:27	05:46 21:00	05:44 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:19	07:40 16:48	08:02 16:54
31	07:46 17:33	07:03 19:50	07:10 19:50	06:16 21:01	05:45 21:01	06:10 20:54	06:46 20:07	06:46 20:07	08:01 18:17	08:02 16:55	08:02 16:55	08:02 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H217 - H217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H220 - H220

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H221 - H221

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H222 - H222

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:57	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H224 - H224

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	07:45	07:04	07:08	07:30 (43)	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	
	16:56	17:34	18:11	19:51	28 07:58 (43)	20:28	21:01	21:14	20:52	20:05	19:09	17:15	16:47	
2	08:02	07:43	07:02	07:06	07:30 (43)	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42	
	16:57	17:35	18:12	19:52	27 07:57 (43)	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:04	07:30 (43)	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43	
	16:58	17:36	18:14	19:53	26 07:56 (43)	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47	
4	08:02	07:41	06:59	07:02	07:30 (43)	06:13	05:43	05:46	06:15	06:51	07:33 (43)	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	25 07:55 (43)	20:31	21:04	21:13	20:49	19:59	10 07:43 (43)	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	07:31 (43)	06:11	05:42	05:46	06:16	06:52	07:30 (43)	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	22 07:53 (43)	20:32	21:05	21:13	20:47	19:57	16 07:46 (43)	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	07:33 (43)	06:10	05:42	05:47	06:17	06:53	07:28 (43)	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	19 07:52 (43)	20:34	21:05	21:13	20:46	19:56	19 07:47 (43)	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	07:34 (43)	06:08	05:41	05:48	06:18	06:54	07:27 (43)	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	16 07:50 (43)	20:35	21:06	21:12	20:45	19:54	22 07:49 (43)	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	07:36 (43)	06:07	05:41	05:48	06:19	06:55	07:25 (43)	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	11 07:47 (43)	20:36	21:07	21:12	20:43	19:52	25 07:50 (43)	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:24 (43)	07:32	07:13	07:49	
	17:04	17:45	19:22	20:00	20:37	21:08	21:12	20:42	19:50	26 07:50 (43)	18:53	17:05	16:46	
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:23 (43)	07:33	07:14	07:50	
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	27 07:50 (43)	18:51	17:04	16:45	
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:22 (43)	07:34	07:15	07:51	
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	28 07:50 (43)	18:49	17:03	16:46	
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:21 (43)	07:36	07:17	07:52	
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	29 07:50 (43)	18:47	17:02	16:46	
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:22 (43)	07:37	07:18	07:53	
	17:08	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	27 07:49 (43)	18:46	17:01	16:46	
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:23 (43)	07:38	07:19	07:53	
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	26 07:49 (43)	18:44	17:00	16:46	
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:25 (43)	07:39	07:21	07:54	
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	24 07:49 (43)	18:42	16:59	16:46	
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:26 (43)	07:41	07:22	07:55	
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	22 07:48 (43)	18:40	16:58	16:46	
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:27 (43)	07:42	07:23	07:56	
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	20 07:47 (43)	18:39	16:57	16:47	
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:28 (43)	07:43	07:25	07:56	
	17:15	17:57	19:33	20:12	20:47	21:12	21:06	20:28	19:33	17 07:45 (43)	18:37	16:56	16:47	
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:29 (43)	07:45	07:26	07:57	
	17:16	17:59	19:34	20:13	20:49	21:12	21:05	20:27	19:32	15 07:44 (43)	18:35	16:55	16:47	
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:30 (43)	07:46	07:27	07:58	
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	11 07:41 (43)	18:34	16:54	16:48	
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:31 (43)	07:47	07:28	07:58	
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	7 07:38 (43)	18:32	16:53	16:48	
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:30	07:59		
	17:20	18:02	19:38	6 07:52 (43)	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49		
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59		
	17:21	18:03	19:39	11 07:55 (43)	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49		
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00		
	17:23	18:04	19:41	14 07:56 (43)	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50		
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00		
	17:24	18:06	19:42	17 07:58 (43)	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50		
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00		
	17:25	18:07	19:43	19 07:58 (43)	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51		
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01		
	17:27	18:08	19:44	22 07:59 (43)	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52		
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01		
	17:28	18:10	19:46	24 07:59 (43)	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52		
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01		
	17:29		19:47	25 07:58 (43)	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53		
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01		
	17:31		19:48	27 07:58 (43)	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54		
31	07:46		07:09	06:17	05:45	06:10	06:46			08:00		08:01		
	17:32		19:49	29 07:58 (43)	21:01	20:54	20:06			18:17		16:55		
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276		
Total, worst case			194	174					371					
Sun reduction			0.59	0.61					0.69					
Oper. time red.			0.98	0.98					0.98					
Wind dir. red.			0.59	0.59					0.59					
Total reduction			0.34	0.35					0.40					
Total, real			66	62					149					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H225 - H225

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	16:01 (44)	07:44	07:04	07:07	06:17
	16:56	26	16:27 (44)	17:34	18:11	19:50
2	08:02	16:02 (44)	07:43	07:02	07:06	06:15
	16:57	26	16:28 (44)	17:35	18:12	19:52
3	08:02	16:02 (44)	07:42	07:00	07:04	06:14
	16:58	27	16:29 (44)	17:36	18:14	19:53
4	08:02	16:03 (44)	07:41	06:59	07:02	06:12
	16:58	28	16:31 (44)	17:38	18:15	19:54
5	08:02	16:03 (44)	07:40	06:57	07:00	06:11
	16:59	29	16:32 (44)	17:39	18:16	19:55
6	08:01	16:03 (44)	07:38	06:55	06:58	06:10
	17:00	29	16:32 (44)	17:41	18:18	19:57
7	08:01	16:03 (44)	07:37	06:53	06:57	06:08
	17:02	30	16:33 (44)	17:42	18:19	19:58
8	08:01	16:04 (44)	07:36	07:51	06:55	06:07
	17:03	31	16:35 (44)	17:43	18:20	19:59
9	08:01	16:05 (44)	07:35	07:50	06:53	06:06
	17:04	31	16:36 (44)	17:45	19:21	20:00
10	08:01	16:05 (44)	07:33	07:48	06:51	06:04
	17:05	30	16:35 (44)	17:46	19:23	20:02
11	08:00	16:05 (44)	07:32	07:46	06:49	06:03
	17:06	31	16:36 (44)	17:48	19:24	20:03
12	08:00	16:05 (44)	07:30	07:44	06:48	06:02
	17:07	31	16:36 (44)	17:49	19:25	20:04
13	07:59	16:06 (44)	07:29	07:42	06:46	06:01
	17:08	31	16:37 (44)	17:50	19:27	20:05
14	07:59	16:06 (44)	07:28	07:41	06:44	06:00
	17:10	30	16:36 (44)	17:52	19:28	20:07
15	07:59	16:08 (44)	07:26	07:39	06:42	05:58
	17:11	29	16:37 (44)	17:53	19:29	20:08
16	07:58	16:08 (44)	07:25	07:37	06:41	05:57
	17:12	29	16:37 (44)	17:55	19:30	20:09
17	07:57	16:08 (44)	07:23	07:35	06:39	05:56
	17:13	29	16:37 (44)	17:56	19:32	20:10
18	07:57	16:10 (44)	07:22	07:33	06:37	05:55
	17:15	27	16:37 (44)	17:57	19:33	20:11
19	07:56	16:10 (44)	07:20	07:31	06:36	05:54
	17:16	27	16:37 (44)	17:59	19:34	20:13
20	07:55	16:11 (44)	07:18	07:30	06:34	05:53
	17:17	25	16:36 (44)	18:00	19:35	20:14
21	07:55	16:12 (44)	07:17	07:28	06:32	19:49 (38)
	17:18	24	16:36 (44)	18:00	19:37	20:15
22	07:54	16:14 (44)	07:15	07:26	06:31	19:53 (38)
	17:20	22	16:36 (44)	18:01	19:38	20:16
23	07:53	16:15 (44)	07:14	07:24	06:29	19:45 (38)
	17:21	20	16:35 (44)	18:03	19:39	20:18
24	07:52	16:17 (44)	07:12	07:22	06:27	19:44 (38)
	17:22	17	16:34 (44)	18:04	19:41	20:19
25	07:51	16:18 (44)	07:10	07:20	06:26	19:43 (38)
	17:24	15	16:33 (44)	18:06	19:42	20:20
26	07:51	16:21 (44)	07:09	07:19	06:24	19:42 (38)
	17:25	9	16:30 (44)	18:07	19:43	20:21
27	07:50		07:07	07:17	06:23	19:41 (38)
	17:27		18:08	19:44	20:23	18
28	07:49		07:05	07:15	06:21	19:41 (38)
	17:28		18:10	19:45	20:24	20
29	07:48			07:13	06:20	19:41 (38)
	17:29			19:47	20:25	21
30	07:47			07:11	06:18	19:40 (38)
	17:31			19:48	20:26	23
31	07:46			07:09		
	17:32			19:49		
Potential sun hours	287	292	369	403	458	464
Total, worst case	683			146	224	
Sun reduction	0.57			0.61	0.65	
Oper. time red.	0.98			0.98	0.98	
Wind dir. red.	0.56			0.63	0.63	
Total reduction	0.31			0.37	0.40	
Total, real	211			54	88	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H225 - H225

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52		06:47 20:05	07:22 19:09	07:02 17:15
2	05:44 21:14	06:12 20:51	19:59 (38) 20:09 (38)	06:48 20:03	07:23 19:07	07:03 17:14
3	05:45 21:13	06:13 20:50	19:56 (38) 20:11 (38)	06:49 20:01	07:24 19:05	07:04 17:13
4	05:46 21:13	06:14 20:49	19:55 (38) 20:12 (38)	06:50 19:59	07:26 19:03	07:06 17:11
5	05:46 21:13	06:16 20:47	19:53 (38) 20:13 (38)	06:52 19:57	07:27 19:02	07:07 17:10
6	05:47 21:13	06:17 20:46	19:52 (38) 20:14 (38)	06:53 19:56	07:28 19:00	07:08 17:09
7	05:48 21:12	06:18 20:45	19:51 (38) 20:15 (38)	06:54 19:54	07:29 18:56	07:10 17:07
8	05:48 21:12	06:19 20:43	19:50 (38) 20:15 (38)	06:55 19:52	07:31 18:54	07:11 17:06
9	05:49 21:11	06:20 20:42	19:50 (38) 20:15 (38)	06:56 19:50	07:32 18:53	07:12 17:05
10	05:50 21:11	06:21 20:40	19:49 (38) 20:15 (38)	06:57 19:48	07:33 18:51	07:14 17:04
11	05:51 21:11	06:22 20:39	19:49 (38) 20:13 (38)	06:59 19:46	07:34 18:49	07:15 17:03
12	05:51 21:10	06:24 20:37	19:48 (38) 20:12 (38)	07:00 19:44	07:36 18:47	07:16 17:02
13	05:52 21:09	06:25 20:36	19:49 (38) 20:11 (38)	07:01 19:43	07:37 18:45	07:18 17:00
14	05:53 21:09	06:26 20:34	19:49 (38) 20:10 (38)	07:02 19:41	07:38 18:44	07:19 16:59
15	05:54 21:08	06:27 20:33	19:48 (38) 20:08 (38)	07:03 19:39	07:39 18:42	07:20 16:58
16	05:55 21:08	06:28 20:31	19:48 (38) 20:06 (38)	07:04 19:37	07:41 18:40	07:22 16:57
17	05:56 21:07	06:29 20:30	19:49 (38) 20:05 (38)	07:06 19:35	07:42 18:39	07:23 16:56
18	05:57 21:06	06:31 20:28	19:49 (38) 20:03 (38)	07:07 19:33	07:43 18:37	07:24 16:56
19	05:58 21:05	06:32 20:27	19:50 (38) 20:01 (38)	07:08 19:31	07:44 18:35	07:26 16:55
20	05:59 21:05	06:33 20:25	19:50 (38) 20:00 (38)	07:09 19:29	07:46 18:34	07:27 16:54
21	06:00 21:04	06:34 20:23	19:51 (38) 19:58 (38)	07:10 19:28	07:47 18:32	07:28 16:53
22	06:01 21:03	06:35 20:22	19:54 (38) 19:57 (38)	07:11 19:26	07:48 18:30	07:30 16:52
23	06:02 21:02	06:36 20:20		07:13 19:24	07:50 18:29	07:31 16:52
24	06:03 21:01	06:38 20:18		07:14 19:22	07:51 18:27	07:32 16:51
25	06:04 21:00	06:39 20:17		07:15 19:20	07:52 18:26	07:33 16:50
26	06:05 20:59	06:40 20:15		07:16 19:18	07:54 18:24	07:35 16:50
27	06:06 20:58	06:41 20:13		07:17 19:16	07:55 18:23	07:36 16:49
28	06:07 20:57	06:42 20:12		07:18 19:15	07:56 18:21	07:37 16:48
29	06:08 20:56	06:43 20:10		07:20 19:13	07:58 18:20	07:38 16:48
30	06:09 20:55	06:45 20:08		07:21 19:11	07:59 18:18	07:39 16:48
31	06:10 20:53	06:46 20:06			08:00 18:17	08:01 16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case		374			364	800
Sun reduction		0.74			0.50	0.49
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.63			0.56	0.56
Total reduction		0.45			0.27	0.27
Total, real		168			98	212

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H226 - H226

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December					
1	08:02	09:45 (44)	07:44	08:19 (45)	07:04	07:08	06:17	05:44	06:11	06:47	07:22	07:02	07:41	08:06 (45)			
16:56	68	15:56 (43)	17:34	20	08:39 (45)	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47	35	15:33 (43)
2	08:02	09:46 (44)	07:43	08:21 (45)	07:02	07:06	06:15	05:43	05:45	06:12	06:48	07:23	07:03	07:42	08:07 (45)		
16:57	66	15:56 (43)	17:35	17	08:38 (45)	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	43	15:36 (43)
3	08:02	09:48 (44)	07:42	08:23 (45)	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43	08:08 (45)		
16:58	63	15:56 (43)	17:36	13	08:36 (45)	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:46	49	15:37 (43)
4	08:02	09:49 (44)	07:41	08:27 (45)	06:59	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:06	07:44	08:09 (45)		
16:59	61	15:56 (43)	17:38	6	08:33 (45)	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46	52	15:39 (43)
5	08:02	09:50 (44)	07:40	08:33 (45)	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	08:10 (45)		
17:00	58	15:56 (43)	17:39	18:16	19:55	20:32	21:05	21:12	21:13	20:47	19:57	19:02	17:10	16:46	55	15:40 (43)	
6	08:01	08:25 (45)	07:39	06:55	06:58	06:10	05:42	05:47	05:47	06:17	06:53	07:28	07:08	07:46	08:11 (45)		
17:01	56	15:55 (43)	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46	56	15:41 (43)		
7	08:01	08:25 (45)	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	7	07:56 (45)	07:47	58	15:42 (43)
17:02	55	15:55 (43)	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	8	08:04 (45)	16:46	58	15:42 (43)
8	08:01	08:25 (45)	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	9	07:53 (45)	07:48	60	15:43 (43)
17:03	52	15:55 (43)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	13	08:06 (45)	16:45	60	15:43 (43)
9	08:01	08:25 (45)	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	10	07:51 (45)	07:49	63	15:44 (43)
17:04	49	15:54 (43)	17:45	19:22	20:00	20:37	21:07	21:12	20:42	19:50	18:53	17:05	18	08:09 (45)	16:45	63	15:44 (43)
10	08:01	08:24 (45)	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:14	10	07:50 (45)	07:50	65	15:45 (43)
17:05	44	15:53 (43)	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	20	08:10 (45)	16:45	65	15:45 (43)
11	08:00	08:24 (45)	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	10	07:49 (45)	07:51	67	15:46 (43)
17:06	36	15:51 (43)	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	23	08:12 (45)	16:45	67	15:46 (43)
12	08:00	08:23 (45)	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:16	07:48 (45)	07:52	69	15:47 (43)	
17:07	20	10:13 (44)	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	24	08:12 (45)	16:45	69	15:47 (43)
13	08:00	08:23 (45)	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:48 (45)	07:53	71	15:48 (43)	
17:08	13	08:36 (45)	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:00	25	08:13 (45)	16:46	71	15:48 (43)
14	07:59	08:22 (45)	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:48 (45)	07:53	73	15:49 (43)	
17:10	14	08:36 (45)	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59	26	08:14 (45)	16:46	73	15:49 (43)
15	07:59	08:22 (45)	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:48 (45)	07:54	75	15:50 (43)	
17:11	15	08:37 (45)	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	27	08:15 (45)	16:46	72	15:49 (43)
16	07:58	08:21 (45)	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:47 (45)	07:55	74	15:50 (43)	
17:12	17	08:38 (45)	17:55	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	28	08:15 (45)	16:46	74	15:49 (43)
17	07:57	08:20 (45)	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:47 (45)	07:56	76	15:51 (43)	
17:13	18	08:38 (45)	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	28	08:15 (45)	16:46	74	15:50 (43)
18	07:57	08:20 (45)	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:49 (45)	07:56	76	15:51 (43)	
17:15	20	08:40 (45)	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	27	08:16 (45)	16:47	75	15:51 (43)
19	07:56	08:19 (45)	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:50 (45)	07:57	77	15:52 (43)	
17:16	21	08:40 (45)	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	26	08:16 (45)	16:47	75	15:51 (43)
20	07:56	08:18 (45)	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:52 (45)	07:57	79	15:53 (43)	
17:17	22	08:40 (45)	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	25	08:17 (45)	16:48	76	15:52 (43)
21	07:55	08:17 (45)	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:53 (45)	07:58	80	15:54 (43)	
17:18	23	08:40 (45)	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	23	08:16 (45)	16:48	76	15:52 (43)
22	07:54	08:17 (45)	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:30	07:54 (45)	07:59	82	15:54 (43)	
17:20	25	08:42 (45)	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	22	08:16 (45)	16:48	76	15:53 (43)
23	07:53	08:16 (45)	07:14	07:24	06:29	05:51	05:41	06:02	06:36	07:13	07:50	07:31	07:56 (45)	07:59	84	15:56 (43)	
17:21	26	08:42 (45)	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	21	08:17 (45)	16:49	76	15:53 (43)
24	07:52	08:15 (45)	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:57 (45)	07:59	86	15:57 (43)	
17:23	27	08:42 (45)	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	20	08:17 (45)	16:50	75	15:54 (43)
25	07:52	08:14 (45)	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:58 (45)	08:00	90	15:59 (43)	
17:24	28	08:42 (45)	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	18	08:16 (45)	16:50	75	15:54 (43)
26	07:51	08:14 (45)	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00 (45)	08:00	94	15:41 (44)	
17:25	28	08:42 (45)	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	17	08:17 (45)	16:51	74	15:54 (43)
27	07:50	08:15 (45)	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01 (45)	08:01	99	15:41 (44)	
17:27	27	08:42 (45)	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16	08:17 (45)	16:52	74	15:54 (43)
28	07:49	08:16 (45)	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:02 (45)	08:01	107	15:42 (44)	
17:28	26	08:42 (45)	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	14	08:16 (45)	16:52	73	15:55 (43)
29	07:48	08:16 (45)		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:03 (45)	08:01	115	15:43 (44)	
17:29	26	08:42 (45)		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	13	08:16 (45)	16:53	73	15:56 (43)
30	07:47	08:17 (45)		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:39	08:05 (45)	08:01	124	15:44 (44)	
17:31	24	08:41 (45)		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	19	09:55 (44)	16:54	71	15:56 (43)
31	07:46	08:18 (45)		07:09	05:45	05:45	05:45	06:10	06:46	07:22	08:00	07:40	18	08:18 (45)	16:54	71	15:56 (43)
17:32	22	08:40 (45)		19:49	21:00	21:00	21:00	20:53	20:06	19:11	18:17	16:55	19	09:55 (44)	16:54	71	15:56 (43)
Potential sun hours	287	292	369	403	458	464											

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H227 - H227

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56 17	15:48 (45) 17:33 18:11	07:44 07:04 18:11	07:07 19:50 20:27	06:17 20:27 21:01	05:44 21:01 21:14	05:44 21:14 20:52	06:11 20:52 20:05	06:47 20:05 19:09	07:22 19:09 17:15	07:02 17:15 16:47	
2	08:02 16:57 16	15:49 (45) 17:33 18:12	07:43 07:04 18:12	07:06 19:52 20:29	06:15 20:29 21:02	05:43 21:02 21:13	05:44 21:13 20:51	06:12 20:51 20:03	06:48 20:03 19:07	07:23 19:07 17:14	07:03 17:14 16:47	
3	08:02 16:57 15	15:50 (45) 17:42 18:14	07:42 07:00 18:14	07:04 19:54 20:30	06:14 20:30 21:03	05:43 21:03 21:13	05:45 21:13 20:50	06:13 20:50 20:01	06:49 20:01 19:05	07:24 19:05 17:13	07:04 17:13 16:46	
4	08:02 16:58 13	15:51 (45) 17:41 18:15	07:41 06:58 18:15	07:02 19:54 20:31	06:12 20:31 21:04	05:42 21:04 21:13	05:46 21:13 20:48	06:14 20:48 19:59	06:50 19:59 19:03	07:26 19:03 17:11	07:06 17:11 16:46	
5	08:02 16:59 11	15:53 (45) 17:39 18:16	07:40 06:57 18:16	07:00 19:55 20:32	06:11 20:32 21:05	05:42 21:05 21:13	05:46 21:13 20:47	06:16 20:47 19:57	06:52 19:57 19:02	07:27 19:02 17:10	07:07 17:10 16:46	15:43 (45) 15:44 (45)
6	08:01 17:00 8	15:54 (45) 17:41 18:17	07:38 06:55 18:17	06:58 19:57 20:33	06:10 20:33 21:05	05:42 21:05 21:13	05:47 21:13 20:46	06:17 20:46 19:56	06:53 19:56 19:00	07:28 19:00 17:09	07:08 17:09 16:46	15:40 (45) 15:48 (45)
7	08:01 17:01 3	15:57 (45) 17:42 18:19	07:37 06:53 18:19	06:57 19:58 20:35	06:08 20:35 21:06	05:41 21:06 21:12	05:48 21:12 20:45	06:18 20:45 19:54	06:54 19:54 18:56	07:29 18:56 17:07	07:10 17:07 16:46	15:39 (45) 15:50 (45)
8	08:01 17:03 9	16:00 (45) 17:43 18:20	07:36 07:51 18:20	06:55 19:59 20:36	06:07 20:36 21:07	05:41 21:07 21:12	05:48 21:12 20:43	06:19 20:43 19:52	06:55 19:52 18:54	07:31 18:54 17:06	07:11 17:06 16:45	15:38 (45) 15:51 (45)
9	08:01 17:04 10	16:04 (45) 17:45 19:21	07:35 07:50 19:21	06:53 20:00 20:37	06:06 20:37 21:07	05:41 21:07 21:11	05:49 21:11 20:42	06:20 20:42 19:50	06:56 18:52 17:05	07:32 17:05 16:45	07:12 16:45 15:52 (45)	15:38 (45) 15:52 (45)
10	08:01 17:05 11	16:04 (45) 17:46 19:23	07:35 07:48 19:23	06:51 20:02 20:38	06:04 20:38 21:08	05:40 21:08 21:11	05:50 21:11 20:40	06:21 19:48 18:51	06:57 18:51 17:04	07:33 17:04 16:45	07:14 16:45 15:54 (45)	15:38 (45) 15:54 (45)
11	08:00 17:06 12	16:02 (45) 17:48 19:24	07:46 06:49 19:24	06:49 20:03 20:39	06:03 20:39 21:09	05:40 21:09 21:11	05:51 21:11 20:39	06:22 19:46 18:49	06:58 18:49 17:03	07:34 17:03 16:45	07:15 16:45 15:55 (45)	15:38 (45) 15:55 (45)
12	08:00 17:07 13	16:02 (45) 17:49 19:25	07:44 06:48 19:25	06:48 20:04 20:41	06:02 20:41 21:09	05:40 21:09 21:10	05:51 21:10 20:37	06:24 19:44 18:47	07:00 18:47 17:01	07:36 17:01 16:45	07:16 16:45 15:56 (45)	15:38 (45) 15:56 (45)
13	07:59 17:08 14	16:00 (45) 17:50 19:27	07:42 07:56 19:27	06:46 20:05 20:42	06:01 20:42 21:10	05:40 21:10 21:09	05:52 21:09 20:36	06:25 19:43 18:45	07:01 18:45 17:00	07:37 17:00 16:45	07:18 16:45 15:57 (45)	15:38 (45) 15:57 (45)
14	07:59 17:09 15	16:00 (45) 17:52 19:28	07:41 06:44 19:28	06:44 20:06 20:43	06:00 20:43 21:10	05:40 21:10 21:09	05:53 21:09 20:34	06:26 19:41 18:44	07:02 18:44 16:59	07:38 16:59 16:46	07:19 16:46 15:58 (45)	15:38 (45) 15:58 (45)
15	07:58 17:11 16	16:00 (45) 17:53 19:29	07:39 06:42 19:29	06:42 20:08 20:44	05:58 20:44 21:11	05:40 21:11 21:08	05:54 21:08 20:33	06:27 19:39 18:42	07:03 18:42 16:58	07:39 16:58 16:46	07:20 16:46 15:58 (45)	15:38 (45) 15:58 (45)
16	07:58 17:12 17	16:00 (45) 17:55 19:30	07:37 06:41 19:30	06:41 20:09 20:45	05:57 20:45 21:11	05:40 21:11 21:08	05:55 21:08 20:31	06:28 19:37 18:40	07:04 18:40 16:57	07:41 16:57 16:46	07:22 16:46 15:59 (45)	15:38 (45) 15:59 (45)
17	07:57 17:13 18	16:00 (45) 17:56 19:32	07:35 06:39 19:32	06:39 20:04 20:46	05:56 20:46 21:12	05:40 21:12 21:07	05:56 21:07 20:30	06:29 19:44 18:47	07:05 18:47 17:01	07:42 17:01 16:45	07:23 16:45 15:56 (45)	15:39 (45) 15:56 (45)
18	07:57 17:14 19	16:00 (45) 17:57 19:33	07:33 06:37 19:33	06:37 20:05 20:42	05:55 20:42 21:10	05:40 21:10 21:09	05:57 21:09 20:36	06:31 19:43 18:45	07:07 18:45 17:00	07:43 17:00 16:45	07:24 16:45 15:57 (45)	15:38 (45) 15:57 (45)
19	07:56 17:16 20	16:00 (45) 17:59 19:34	07:31 06:36 19:34	06:36 20:03 20:48	05:54 20:48 21:12	05:40 21:12 21:05	05:58 21:05 20:27	06:32 19:31 18:35	07:08 18:35 16:55	07:44 16:55 16:47	07:26 16:47 15:59 (45)	15:39 (45) 16:00 (45)
20	07:55 17:17 21	16:00 (45) 18:00 19:35	07:30 06:34 19:35	06:34 20:04 20:49	05:53 20:49 21:13	05:40 21:13 21:04	05:59 21:04 20:25	06:33 19:29 18:34	07:09 18:34 16:54	07:46 16:54 16:47	07:27 16:47 15:59 (45)	15:40 (45) 16:01 (45)
21	07:55 17:18 22	16:00 (45) 18:00 19:37	07:28 06:32 19:37	06:32 20:05 20:51	05:52 20:51 21:13	05:40 21:13 21:04	06:00 21:04 20:23	06:34 19:28 18:32	07:10 18:32 16:53	07:47 16:53 16:48	07:28 16:48 15:59 (45)	15:40 (45) 16:01 (45)
22	07:54 17:20 23	16:00 (45) 18:01 19:38	07:26 06:31 19:38	06:31 20:16 20:52	05:51 20:52 21:13	05:40 21:13 21:03	06:01 21:03 20:22	06:35 19:26 18:30	07:11 18:30 16:52	07:48 16:52 16:48	07:30 16:48 15:59 (45)	15:41 (45) 16:02 (45)
23	07:53 17:21 24	16:00 (45) 18:03 19:39	07:24 06:29 19:39	06:29 20:18 20:53	05:50 20:53 21:13	05:41 21:13 21:02	06:02 21:02 20:20	06:36 19:24 18:29	07:12 18:29 16:51	07:50 16:51 16:49	07:31 16:49 15:59 (45)	15:41 (45) 16:02 (45)
24	07:52 17:22 25	16:00 (45) 18:04 19:40	07:22 06:27 19:40	06:27 20:19 20:54	05:50 20:54 21:14	05:41 21:14 21:01	06:03 21:01 20:18	06:38 19:22 18:27	07:14 18:27 16:51	07:51 16:51 16:49	07:32 16:49 15:59 (45)	15:41 (45) 16:02 (45)
25	07:51 17:24 26	16:00 (45) 18:05 19:42	07:20 06:26 19:42	06:26 20:20 20:55	05:49 20:55 21:14	05:41 21:14 21:00	06:04 21:00 20:17	06:39 19:20 18:26	07:15 18:26 16:50	07:52 16:50 16:50	07:33 16:50 15:59 (45)	15:43 (45) 16:03 (45)
26	07:51 17:25 27	16:00 (45) 18:07 19:43	07:18 06:24 19:43	06:24 20:21 20:56	05:48 20:56 21:14	05:42 21:14 20:59	06:05 20:59 20:15	06:40 20:15 19:18	07:16 18:24 16:50	07:54 16:50 16:51	07:35 16:51 15:59 (45)	15:43 (45) 16:03 (45)
27	07:50 17:27 28	16:00 (45) 18:08 19:44	07:17 06:23 19:44	06:23 20:22 20:57	05:47 20:57 21:14	05:42 21:14 20:58	06:06 20:58 20:13	06:41 20:13 19:16	07:17 18:23 16:49	07:55 16:49 16:51	07:36 16:51 15:59 (45)	15:43 (45) 16:04 (45)
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29	07:48 17:29 30	16:00 (45) 18:11 19:47	07:13 06:20 19:47	06:20 20:54 20:59	05:46 20:59 21:14	05:43 21:14 20:56	06:08 21:06 20:10	06:43 20:10 19:13	07:20 18:20 16:48	07:58 16:48 16:53	07:38 16:53 15:59 (45)	15:45 (45) 16:05 (45)
30	07:47 17:31 31	16:00 (45) 18:11 19:48	07:11 06:18 19:48	06:18 20:26 20:59	05:45 20:59 21:14	05:43 21:14 20:55	06:09 20:55 20:08	06:45 20:08 19:11	07:21 18:18 16:47	07:59 16:47 16:54	07:39 16:54 15:59 (45)	15:46 (45) 16:05 (45)
	07:45 17:32	16:00 (45) 18:11 19:49	07:09 06:17 19:49	05:45 21:00 20:53	05:45 21:00 20:53	06:10 20:53 20:06	06:46 20:06 18:17	08:00 18:17 16:55	08:01 16:55 15:59 (45)	08:01 16:55 15:59 (45)	08:01 16:55 15:59 (45)	15:47 (45) 16:05 (45)
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case			83									482
Sun reduction			0.57									0.49
Oper. time red.			0.98									0.98
Wind dir. red.			0.56									0.56
Total reduction			0.31									0.27
Total, real			26									128

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H228 - H228

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H230 - H230

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:38	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H233 - H233

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:31	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:07	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:30	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H248 - H248

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:02	07:23 19:07	07:03 17:14	07:41 16:46
3	08:01 16:57	07:42 17:36	07:00 18:13	07:03 19:53	06:13 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:03	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:47 21:12	06:16 20:46	06:52 19:55	07:28 18:58	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:18 20:44	06:54 19:53	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	06:51 18:20	06:54 19:59	06:07 20:36	05:41 21:06	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:34 17:44	06:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:04	07:33 17:46	06:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:49 21:11	06:21 20:40	06:57 19:48	07:33 18:50	07:13 17:03	07:50 16:45
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:02	06:03 20:39	05:40 21:08	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:50 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:00 20:41	05:40 21:10	05:52 21:09	06:24 20:36	07:01 19:42	07:36 18:45	07:17 17:00	07:52 16:45
14	07:59 17:09	07:27 17:51	06:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:40	07:38 18:43	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	06:38 19:29	06:42 20:07	05:58 20:44	05:39 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	06:37 19:30	06:40 20:09	05:57 20:45	05:39 21:11	05:54 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:21 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:31	06:39 20:10	05:56 20:46	05:39 21:11	05:55 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	06:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:31 20:26	07:08 19:31	07:44 18:35	07:25 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33	07:27 16:53	07:57 16:47
21	07:54 17:18	07:17 18:00	06:27 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:19	07:15 18:01	06:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:21	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:02	06:24 19:39	06:29 20:17	05:50 20:52	05:40 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:28	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	05:49 20:53	05:41 21:13	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:50	07:59 16:49
25	07:51 17:23	07:10 18:05	06:20 19:41	06:26 20:20	05:48 20:54	05:41 21:13	06:03 21:00	06:38 20:16	07:15 19:20	07:52 18:25	07:33 16:50	08:00 16:50
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28	07:48 17:28	07:05 18:09	06:15 19:45	06:21 20:23	05:46 20:57	05:42 21:14	06:06 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:46	06:13 20:25	06:19 20:58	05:45 20:58	05:43 21:14	05:43 20:55	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:53
30	07:46 17:30	07:03 19:48	06:11 20:26	06:18 20:59	05:45 21:13	05:43 20:54	06:09 20:08	06:44 19:10	07:21 18:18	07:59 16:47	07:39 16:53	08:01 16:53
31	07:45 17:32	07:02 19:49	06:09 20:26	06:16 21:00	05:44 21:00	06:10 20:53	06:45 20:06	06:45 18:16	08:00 16:49	08:00 16:49	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H249 - H249

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:45
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	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:45
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	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H250 - H250

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H251 - H251

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the year, including sunrise/sunset times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout with columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time).

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H252 - H252

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	15:57 (44)	07:44	07:04	07:07	19:25 (38)	06:17	05:44	05:44	06:11	06:47	19:17 (38)	07:22	07:02	07:41
	16:56	17 16:14 (44)	17:33	18:11	19:50	4 19:29 (38)	20:27	21:01	21:14	20:52	20:05	23 19:40 (38)	19:09	17:15	16:47
2	08:02	15:58 (44)	07:43	07:02	07:06	19:23 (38)	06:15	05:43	05:44	06:12	06:48	19:16 (38)	07:23	07:03	07:42
	16:57	17 16:15 (44)	17:35	18:12	19:52	7 19:30 (38)	20:29	21:02	21:14	20:51	20:03	22 19:38 (38)	19:07	17:14	16:47
3	08:02	15:59 (44)	07:42	07:00	07:04	19:21 (38)	06:14	05:43	05:45	06:13	06:49	19:16 (38)	07:24	07:04	07:43
	16:57	16 16:15 (44)	17:36	18:14	19:53	10 19:31 (38)	20:30	21:03	21:13	20:50	20:01	20 19:36 (38)	19:05	17:13	16:46
4	08:02	16:00 (44)	07:41	06:58	07:02	19:20 (38)	06:12	05:42	05:46	06:14	06:50	19:15 (38)	07:26	07:06	07:44
	16:58	14 16:14 (44)	17:38	18:15	19:54	12 19:32 (38)	20:31	21:04	21:13	20:49	19:59	19 19:34 (38)	19:03	17:11	16:46
5	08:02	16:02 (44)	07:40	06:57	07:00	19:19 (38)	06:11	05:42	05:46	06:16	06:52	19:14 (38)	07:27	07:07	07:45
	16:59	12 16:14 (44)	17:39	18:16	19:55	14 19:33 (38)	20:32	21:05	21:13	20:47	19:57	19 19:33 (38)	19:02	17:10	16:46
6	08:01	16:02 (44)	07:38	06:55	06:58	19:18 (38)	06:10	05:42	05:47	06:17	06:53	19:14 (38)	07:28	07:08	07:46
	17:00	11 16:15 (44)	17:41	18:18	19:57	16 19:34 (38)	20:33	21:05	21:13	20:46	19:56	17 19:31 (38)	19:00	17:09	16:46
7	08:01	16:04 (44)	07:37	06:53	06:57	19:18 (38)	06:08	05:41	05:48	06:18	06:54	19:14 (38)	07:29	07:10	07:47
	17:02	8 16:12 (44)	17:42	18:19	19:58	18 19:36 (38)	20:35	21:06	21:12	20:45	19:54	15 19:29 (38)	18:56	17:07	16:46
8	08:01	16:08 (44)	07:36	07:51	06:55	19:18 (38)	06:07	05:41	05:48	06:19	06:55	19:14 (38)	07:31	07:11	07:48
	17:03	2 16:10 (44)	17:43	18:20	19:59	19 19:37 (38)	20:36	21:07	21:12	20:43	19:52	13 19:27 (38)	18:54	17:06	16:45
9	08:01	17:04	07:35	07:50	06:53	19:18 (38)	06:06	05:41	05:49	06:20	06:56	19:15 (38)	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20 19:38 (38)	20:37	21:07	21:11	20:42	19:50	11 19:26 (38)	18:53	17:05	16:45	16:14
10	08:01	17:05	07:33	07:48	06:51	19:17 (38)	06:04	05:40	05:50	06:21	06:57	19:16 (38)	07:33	07:14	07:50
	17:00	17:46	19:23	20:02	22 19:39 (38)	20:38	21:08	21:11	20:40	19:48	8 19:24 (38)	18:51	17:04	16:45	17:16
11	08:00	17:06	07:32	07:46	06:49	19:19 (38)	06:03	05:40	05:51	06:22	06:59	19:17 (38)	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	22 19:41 (38)	20:39	21:09	21:11	20:39	19:46	5 19:22 (38)	18:49	17:03	16:45	18:05
12	08:00	17:07	07:30	07:44	06:48	19:19 (38)	06:02	05:40	05:51	06:24	07:00	19:18 (38)	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20 19:39 (38)	20:41	21:09	21:10	20:37	19:44	2 19:20 (38)	18:47	17:01	16:45	18:05
13	07:59	17:08	07:29	07:42	06:46	19:20 (38)	06:01	05:40	05:52	06:25	07:01	19:20 (38)	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	18 19:38 (38)	20:42	21:10	21:09	20:36	19:43		18:45	17:00	16:46	18:06
14	07:59	17:10	07:28	07:41	06:44	19:21 (38)	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53	18:48
	17:10	17:52	19:28	20:07	15 19:36 (38)	20:43	21:10	21:09	20:34	19:41		18:44	16:59	16:46	19:07
15	07:59	17:11	07:26	07:39	06:42	19:24 (38)	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54	18:48
	17:11	17:53	19:29	20:08	10 19:34 (38)	20:44	21:11	21:08	20:33	19:39		18:42	16:58	16:46	20:08
16	07:58	17:12	07:25	07:37	06:41	19:25 (38)	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55	18:48
	17:12	17:55	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40		18:40	16:57	16:46	20:08
17	07:57	17:13	07:23	07:35	06:39	19:26 (38)	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:56	18:49
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39		18:39	16:56	16:46	20:09
18	07:57	17:15	07:22	07:33	06:37	19:27 (38)	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56	18:49
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37		18:37	16:56	16:47	21:16
19	07:56	17:16	07:20	07:31	06:36	19:28 (38)	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57	18:49
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35		18:35	16:55	16:47	21:16
20	07:55	17:17	07:18	07:30	06:34	19:29 (38)	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57	18:50
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:34		18:34	16:54	16:47	21:16
21	07:55	17:18	07:17	07:28	06:32	19:30 (38)	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58	18:50
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32		18:32	16:53	16:48	21:16
22	07:54	17:20	07:15	07:26	06:31	19:31 (38)	05:51	05:40	06:01	06:35	07:11	07:48	07:30	07:58	18:51
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30		18:30	16:52	16:48	21:16
23	07:53	17:21	07:14	07:24	06:29	19:32 (38)	05:50	05:41	06:02	06:36	07:13	07:50	07:31	07:59	18:51
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29		18:29	16:51	16:49	21:16
24	07:52	17:22	07:12	07:22	06:27	19:33 (38)	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59	18:52
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27		18:27	16:51	16:50	21:16
25	07:51	17:23	07:10	07:20	06:26	19:34 (38)	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00	18:52
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26		18:26	16:50	16:50	21:16
26	07:51	17:25	07:09	07:19	06:24	19:35 (38)	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00	18:53
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24		18:24	16:50	16:51	20:16
27	07:50	17:27	07:07	07:17	06:23	19:36 (38)	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01	18:53
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:23		18:23	16:49	16:51	20:16
28	07:49	17:28	07:05	07:15	06:21	19:37 (38)	05:46	05:42	06:07	06:42	19:24 (38)	07:56	07:37	08:01	18:54
	17:28	18:10	19:45	20:24	20:58	21:14	20:57	20:12	11 19:35 (38)	19:14		18:21	16:48	16:52	20:16
29	07:48	17:29	07:04	07:13	06:20	19:38 (38)	05:46	05:43	06:08	06:43	19:21 (38)	07:58	07:38	08:01	18:55
	17:29	18:11	19:47	20:25	20:59	21:14	20:56	20:10	16 19:37 (38)	19:13		18:20	16:48	16:53	19:16
30	07:47	17:31	07:03	07:11	06:18	19:39 (38)	05:45	05:43	06:09	06:45	19:22 (38)	07:59	07:39	08:01	18:55
	17:31	18:13	19:48	20:26	21:00	21:14	20:55	20:08	19 19:38 (38)	19:11		18:18	16:48	16:54	19:16
31	07:46	17:32	07:02	07:09	06:17	19:40 (38)	05:45	05:40	06:10	06:46	19:19 (38)	08:00	07:40	08:01	18:56
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	20 19:39 (38)	19:14		18:17	16:49	16:55	18:16
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276			497
Total, worst case	97			227				66	174						497
Sun reduction	0.57			0.61				0.74	0.69						0.49
Oper. time red.	0.98			0.98				0.98	0.98						0.98
Wind dir. red.	0.55			0.61				0.61	0.61						0.55
Total reduction	0.31			0.36				0.44	0.41						0.26
Total, real	30			82				29	71						130

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H253 - H253

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02	08:26 (41)	07:44	07:04	07:08	07:28 (40)	06:17	05:44
	16:56	58 10:31 (39)	17:34	18:11	19:50	20 07:48 (40)	20:27	21:01
2	08:02	08:26 (41)	07:43	07:02	07:06	07:26 (40)	06:15	05:43
	16:57	58 10:31 (39)	17:35	18:12	19:52	22 07:48 (40)	20:29	21:02
3	08:02	08:26 (41)	07:42	07:00	07:04	07:24 (40)	06:14	05:43
	16:58	56 10:31 (39)	17:36	18:14	19:53	24 07:48 (40)	20:30	21:03
4	08:02	08:26 (41)	07:41	06:59	07:02	07:22 (40)	06:12	05:42
	16:58	55 10:30 (39)	17:38	18:15	19:54	26 07:48 (40)	20:31	21:04
5	08:02	08:26 (41)	07:40	06:57	07:00	07:20 (40)	06:11	05:42
	16:59	54 10:30 (39)	17:39	18:16	19:55	28 07:48 (40)	20:32	21:05
6	08:02	08:26 (41)	07:39	06:55	06:58	07:18 (40)	06:10	05:42
	17:00	52 10:29 (39)	17:41	18:18	19:57	29 07:47 (40)	20:34	21:05
7	08:01	08:25 (41)	07:37	06:53	06:57	07:17 (40)	06:08	05:41
	17:02	50 10:28 (39)	17:42	18:19	19:58	31 07:48 (40)	20:35	21:06
8	08:01	08:25 (41)	07:36	07:52	06:55	07:15 (40)	06:07	05:41
	17:03	48 10:27 (39)	17:43	18:20	19:59	32 07:47 (40)	20:36	21:07
9	08:01	08:26 (41)	07:35	07:50	06:53	07:13 (40)	06:06	05:41
	17:04	43 10:26 (39)	17:45	19:21	20:00	33 07:46 (40)	20:37	21:07
10	08:01	08:26 (41)	07:33	07:48	06:51	07:12 (40)	06:04	05:40
	17:05	38 10:23 (39)	17:46	19:23	20:02	33 07:45 (40)	20:38	21:08
11	08:00	08:27 (41)	07:32	07:46	06:49	07:13 (40)	06:03	05:40
	17:06	28 10:19 (39)	17:48	19:24	20:03	32 07:45 (40)	20:39	21:09
12	08:00	08:27 (41)	07:31	07:44	06:48	07:13 (40)	06:02	05:40
	17:07	21 08:48 (41)	17:49	19:25	20:04	31 07:44 (40)	20:41	21:09
13	08:00	08:29 (41)	07:29	07:43	06:46	07:13 (40)	06:01	05:40
	17:08	20 08:49 (41)	17:50	19:27	20:05	29 07:42 (40)	20:42	21:10
14	07:59	08:29 (41)	07:28	07:41	06:44	07:14 (40)	06:00	05:40
	17:10	19 08:48 (41)	17:52	19:28	20:07	26 07:40 (40)	20:43	21:10
15	07:59	08:31 (41)	07:26	07:39	06:42	07:16 (40)	05:58	05:40
	17:11	17 08:48 (41)	17:53	19:29	20:08	23 07:39 (40)	20:44	21:11
16	07:58	08:32 (41)	07:25	07:37	06:41	07:17 (40)	05:57	05:40
	17:12	15 08:47 (41)	17:55	19:30	20:09	20 07:37 (40)	20:45	21:11
17	07:57	08:34 (41)	07:23	07:35	06:39	07:19 (40)	05:56	05:40
	17:13	13 08:47 (41)	17:56	19:32	20:10	15 07:34 (40)	20:46	21:12
18	07:57	08:36 (41)	07:22	07:33	06:37	07:24 (40)	05:55	05:40
	17:15	9 08:45 (41)	17:57	19:33	20:12	6 07:30 (40)	20:47	21:12
19	07:56		07:20	07:32	06:36		05:54	05:40
	17:16		17:59	19:34	20:13		20:49	21:12
20	07:56		07:19	07:30	06:34		05:53	05:40
	17:17		18:00	19:36	20:14		20:50	21:13
21	07:55		07:17	07:28	06:32		05:52	05:40
	17:18		18:00	19:37	20:15		20:51	21:13
22	07:54		07:15	07:26	06:31		05:51	05:40
	17:20		18:01	19:38	20:16		20:52	21:13
23	07:53		07:14	07:24	06:29		05:50	05:41
	17:21		18:03	19:39	20:18		20:53	21:13
24	07:52		07:12	07:22	06:27		05:50	05:41
	17:22		18:04	19:41	20:19		20:54	21:14
25	07:52		07:10	07:20	06:26		05:49	05:41
	17:24		18:06	19:42	20:20		20:55	21:14
26	07:51		07:09	07:19	06:24		05:48	05:42
	17:25		18:07	19:43	20:21		20:56	21:14
27	07:50		07:07	07:17	06:23		05:47	05:42
	17:27		18:08	19:44	4 07:37 (40)		20:57	21:14
28	07:49		07:05	07:15	06:21		05:46	05:42
	17:28		18:10	19:46	8 07:43 (40)		20:58	21:14
29	07:48			07:13	06:20		05:46	05:43
	17:29			19:47	12 07:45 (40)		20:59	21:14
30	07:47			07:11	06:18		05:45	05:43
	17:31			19:48	15 07:46 (40)		21:00	21:14
31	07:46			07:09	07:29 (40)		05:45	
	17:32			19:49	17 07:46 (40)		21:01	
Potential sun hours	287	292	369	403	458	464		
Total, worst case	654		56	460				
Sun reduction	0.57		0.59	0.61				
Oper. time red.	0.98		0.98	0.98				
Wind dir. red.	0.71		0.58	0.58				
Total reduction	0.40		0.34	0.35				
Total, real	262		19	160				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H254 - H254

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December						
1	08:02	07:45	07:04	07:08	06:17	07:07 (38)	05:44	05:44	06:11	06:47	07:09 (38)	07:22	07:02	07:41				
	16:56	17:34	18:11	19:51	20:27	32	07:39 (38)	21:01	21:14	20:52	20:05	40	07:49 (38)	19:09	17:15	16:47		
2	08:02	07:43	07:02	07:06	06:15	07:08 (38)	05:44	05:45	06:12	06:48	07:10 (38)	07:23	07:03	07:42				
	16:57	17:35	18:12	19:52	20:29	28	07:36 (38)	21:02	21:14	20:51	20:03	38	07:48 (38)	19:07	17:14	16:47		
3	08:02	07:42	07:00	07:04	06:14	07:10 (38)	05:43	05:45	06:13	06:49	07:11 (38)	07:25	07:04	07:43				
	16:58	17:36	18:14	19:53	20:30	25	07:35 (38)	21:03	21:13	20:50	20:01	36	07:47 (38)	19:05	17:13	16:46		
4	08:02	07:41	06:59	07:02	06:12	07:12 (38)	05:43	05:46	06:15	06:50	07:12 (38)	07:26	07:06	07:44				
	16:59	17:38	18:15	19:54	20:31	21	07:33 (38)	21:04	21:13	20:49	19:59	33	07:45 (38)	19:03	17:11	16:46		
5	08:02	07:40	06:57	07:00	06:11	07:14 (38)	05:42	05:46	06:16	06:52	07:13 (38)	07:27	07:07	07:45				
	17:00	17:39	18:16	19:55	20:32	25	07:45 (38)	21:05	21:13	20:47	19:57	31	07:44 (38)	19:02	17:10	16:46		
6	08:02	07:39	06:55	06:58	06:10	07:19 (38)	05:42	05:47	06:17	06:53	07:14 (38)	07:28	07:08	07:46				
	17:01	17:41	18:18	19:57	20:34	28	07:47 (38)	20:34	21:05	21:13	20:46	19:56	28	07:42 (38)	19:00	17:09	16:46	
7	08:01	07:37	06:53	06:57	06:08	07:17 (38)	05:41	05:48	06:18	06:54	07:15 (38)	07:29	07:10	07:47				
	17:02	17:42	18:19	19:58	20:35	31	07:48 (38)	21:06	21:12	20:45	9	07:36 (38)	19:54	25	07:40 (38)	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	07:15 (38)	05:41	05:48	06:19	06:55	07:17 (38)	07:31	07:11	07:48				
	17:03	17:43	18:20	19:59	20:36	33	07:48 (38)	21:07	21:12	20:43	17	07:40 (38)	19:52	22	07:39 (38)	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	07:13 (38)	05:41	05:49	06:20	06:56	07:20 (38)	06:56	07:18	07:49				
	17:04	17:45	18:22	20:00	20:37	36	07:49 (38)	21:07	21:12	20:42	22	07:42 (38)	19:50	18	07:36 (38)	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	07:11 (38)	05:41	05:50	06:21	06:57	07:18 (38)	06:57	07:19	07:50				
	17:05	17:46	18:23	20:02	20:38	38	07:49 (38)	21:08	21:11	20:40	26	07:44 (38)	19:48	13	07:32 (38)	18:51	17:04	16:45
11	08:00	07:32	07:46	06:50	06:03	07:10 (38)	05:40	05:51	06:23	06:59	07:16 (38)	06:59	07:34	07:51				
	17:06	17:48	18:24	20:03	20:39	40	07:50 (38)	21:09	21:11	20:39	30	07:46 (38)	19:46	18	07:33 (38)	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	07:08 (38)	05:40	05:51	06:24	06:55	07:15 (38)	07:00	07:36	07:52				
	17:07	17:49	18:25	20:04	20:41	42	07:50 (38)	21:09	21:10	20:38	33	07:48 (38)	19:45	18	07:34 (38)	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	07:06 (38)	05:40	05:52	06:25	06:56	07:14 (38)	07:01	07:37	07:53				
	17:08	17:50	18:27	20:05	20:42	44	07:50 (38)	21:10	21:10	20:36	35	07:49 (38)	19:43	18	07:35 (38)	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	07:04 (38)	05:40	05:53	06:26	06:57	07:13 (38)	07:02	07:38	07:53				
	17:10	17:52	18:28	20:07	20:43	46	07:50 (38)	21:10	21:09	20:35	37	07:50 (38)	19:41	18	07:36 (38)	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	07:03 (38)	05:40	05:54	06:27	06:58	07:11 (38)	07:03	07:39	07:54				
	17:11	17:53	18:29	20:08	20:44	48	07:51 (38)	21:11	21:08	20:33	39	07:50 (38)	19:39	18	07:37 (38)	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	07:02 (38)	05:40	05:55	06:28	06:59	07:10 (38)	07:04	07:41	07:55				
	17:12	17:55	18:31	20:09	20:45	48	07:50 (38)	21:11	21:08	20:32	41	07:51 (38)	19:37	18	07:38 (38)	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	07:01 (38)	05:40	05:56	06:30	06:57	07:09 (38)	07:06	07:42	07:56				
	17:13	17:56	18:32	20:10	20:46	49	07:50 (38)	21:12	21:07	20:30	42	07:51 (38)	19:35	18	07:39 (38)	18:39	16:57	16:46
18	07:57	07:22	07:33	06:37	05:55	07:02 (38)	05:40	05:57	06:31	06:58	07:08 (38)	07:07	07:43	07:56				
	17:15	17:57	18:33	20:12	20:47	48	07:50 (38)	21:12	21:06	20:28	44	07:52 (38)	19:33	18	07:40 (38)	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	07:01 (38)	05:40	05:58	06:32	06:59	07:07 (38)	07:08	07:45	07:57				
	17:16	17:59	18:34	20:13	20:49	48	07:49 (38)	21:12	21:05	20:27	45	07:52 (38)	19:31	18	07:41 (38)	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	07:01 (38)	05:40	05:59	06:33	06:56	07:06 (38)	07:09	07:46	07:58				
	17:17	18:00	18:35	20:14	20:50	48	07:49 (38)	21:13	21:05	20:25	46	07:52 (38)	19:30	18	07:42 (38)	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	07:02 (38)	05:40	06:00	06:34	06:57	07:07 (38)	07:10	07:47	07:58				
	17:19	18:00	18:37	20:15	20:51	48	07:49 (38)	21:13	21:04	20:24	46	07:53 (38)	19:28	18	07:43 (38)	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	07:01 (38)	05:41	06:01	06:35	06:58	07:06 (38)	07:11	07:48	07:59				
	17:20	18:02	18:38	20:16	20:52	47	07:48 (38)	21:13	21:03	20:22	47	07:53 (38)	19:26	18	07:44 (38)	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:51	07:02 (38)	05:41	06:02	06:36	06:59	07:05 (38)	07:13	07:50	07:59				
	17:21	18:03	18:39	20:18	20:53	46	07:48 (38)	21:13	21:02	20:20	48	07:53 (38)	19:24	18	07:45 (38)	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	07:02 (38)	05:41	06:03	06:38	06:57	07:05 (38)	07:14	07:51	08:00				
	17:23	18:04	18:41	20:19	20:54	44	07:46 (38)	21:14	21:01	20:19	48	07:53 (38)	19:22	18	07:46 (38)	18:27	16:51	16:50
25	07:52	07:10	07:20	06:26	05:49	07:03 (38)	05:41	06:04	06:39	06:57	07:04 (38)	07:15	07:52	08:00				
	17:24	18:06	18:42	20:20	20:55	43	07:46 (38)	21:14	21:00	20:17	49	07:53 (38)	19:20	18	07:47 (38)	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	07:03 (38)	05:42	06:05	06:40	06:58	07:04 (38)	07:16	07:54	08:00				
	17:25	18:07	18:43	20:21	20:56	42	07:45 (38)	21:14	20:59	20:15	49	07:53 (38)	19:18	18	07:48 (38)	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	07:04 (38)	05:42	06:06	06:41	06:59	07:04 (38)	07:17	07:55	08:01				
	17:27	18:08	18:44	20:23	20:57	40	07:44 (38)	21:14	20:58	20:13	48	07:52 (38)	19:16	18	07:49 (38)	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	07:04 (38)	05:43	06:07	06:42	06:59	07:04 (38)	07:19	07:56	08:01				
	17:28	18:10	18:46	20:24	20:58	38	07:42 (38)	21:14	20:57	20:12	48	07:52 (38)	19:15	18	07:50 (38)	18:21	16:49	16:52
29	07:48	07:13	07:23	06:20	05:46	07:05 (38)	05:43	06:08	06:43	06:59	07:05 (38)	07:20	07:58	08:01				
	17:29	18:11	18:47	20:25	20:59	37	07:42 (38)	21:14	20:56	20:10	46	07:51 (38)	19:13	18	07:51 (38)	18:20	16:48	16:53
30	07:47	07:11	07:21	06:18	05:45	07:06 (38)	05:43	06:09	06:45	06:59	07:07 (38)	07:21	07:59	08:01				
	17:31	18:13	18:49	20:26	21:00	34	07:40 (38)	21:14	20:55	20:08	44	07:51 (38)	19:11	18	07:52 (38)	18:18	16:48	16:54
31	07:46	07:09	07:19	06:25	05:45	07:07 (38)	05:43	06:10	06:46	06:59	07:08 (38)	07:22	08:00	08:01				
	17:32	18:14	18:50	20:27	21:01	32	07:40 (38)	21:14	20:54	20:06	42	07:50 (38)	19:09	18	07:53 (38)	18:17	16:48	16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	284	341	289	276					
Total, worst case				1121	123			981	284									
Sun reduction				0.61	0.65			0.74	0.69									
Oper. time red.				0.98	0.98			0.98	0.98									
Wind dir. red.				0.56	0.56			0.56	0.56									
Total reduction				0.34	0.36			0.41	0.38									
Total, real				377	44			40										

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H255 - H255

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	07:28 (38) 20:28	05:44 21:01
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	07:26 (38) 20:29	05:44 21:02
3	08:02 16:58	07:42 17:36	07:00 18:14	07:04 19:53	07:24 (38) 20:30	05:43 21:03
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	07:22 (38) 20:31	05:43 21:04
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	07:20 (38) 20:32	05:42 21:05
6	08:02 17:01	07:39 17:41	06:55 18:18	06:58 19:57	07:19 (38) 20:34	05:42 21:05
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	07:17 (38) 20:35	05:41 21:06
8	08:01 17:03	07:36 17:43	06:52 18:20	06:55 19:59	07:16 (38) 20:36	05:41 21:07
9	08:01 17:04	07:35 17:45	06:50 19:22	06:53 20:00	07:16 (38) 20:37	05:41 21:08
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	07:17 (38) 20:38	05:41 21:08
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	07:19 (38) 20:40	05:40 21:09
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	07:22 (38) 20:41	05:40 21:09
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:05	19:31 (36) 20:42	05:40 21:10
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	19:31 (36) 20:43	05:40 21:10
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	19:31 (36) 20:44	05:40 21:11
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	19:31 (36) 20:45	05:40 21:11
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	19:32 (36) 20:46	05:40 21:12
18	07:57 17:15	07:22 17:57	07:33 19:33	06:37 20:12	19:34 (36) 20:47	05:40 21:12
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	19:35 (36) 20:49	05:40 21:12
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	06:34 20:50	05:40 21:13
21	07:55 17:19	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:51	05:40 21:13
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:16	05:51 20:52	05:41 21:13
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	05:51 20:53	05:41 21:14
24	07:52 17:23	07:12 18:04	07:22 19:41	06:28 20:19	05:50 20:54	05:41 21:14
25	07:52 17:24	07:11 18:06	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:14
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:21	05:48 20:56	05:42 21:14
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	05:47 20:57	05:42 21:14
28	07:49 17:28	07:05 18:10	07:15 19:46	07:35 (38) 07:39 (38)	06:21 20:24	05:43 21:14
29	07:48 17:29		07:13 19:47	07:33 (38) 07:40 (38)	06:20 20:25	05:43 21:14
30	07:47 17:31		07:11 19:48	07:31 (38) 07:41 (38)	06:18 20:26	05:44 21:14
31	07:46 17:32		07:09 19:49	07:29 (38) 07:41 (38)	05:45 21:01	05:44 21:14
Potential sun hours	287	292	369	403	458	464
Total, worst case			33	340		154
Sun reduction			0.59	0.61		0.70
Oper. time red.			0.98	0.98		0.98
Wind dir. red.			0.58	0.59		0.69
Total reduction			0.33	0.35		0.47
Total, real			11	120		72

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H255 - H255

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	20:41 (37)	06:11	06:47	07:18 (38)	07:22	07:02	07:41
	21:14	5 20:46 (37)	20:52	20:05	24 19:40 (36)	19:09	17:15	16:47
2	05:45	20:42 (37)	06:12	06:48	07:16 (38)	07:23	07:03	07:42
	21:14	4 20:46 (37)	20:51	20:03	25 19:38 (36)	19:07	17:14	16:47
3	05:45	20:42 (37)	06:13	06:49	07:14 (38)	07:25	07:04	07:43
	21:13	4 20:46 (37)	20:50	20:01	25 19:36 (36)	19:05	17:13	16:47
4	05:46	20:43 (37)	06:15	06:51	07:13 (38)	07:26	07:06	07:44
	21:13	3 20:46 (37)	20:49	19:59	23 19:34 (36)	19:04	17:11	16:46
5	05:46	20:44 (37)	06:16	06:52	07:13 (38)	07:27	07:07	07:45
	21:13	2 20:46 (37)	20:47	19:57	23 07:36 (38)	19:02	17:10	16:46
6	05:47	20:44 (37)	06:17	06:53	07:14 (38)	07:28	07:08	07:46
	21:13	1 20:45 (37)	20:46	19:56	22 07:36 (38)	19:00	17:09	16:46
7	05:48		06:18	06:54	07:15 (38)	07:29	07:10	07:47
	21:12		20:45	19:54	21 07:36 (38)	18:56	17:07	16:46
8	05:48		06:19	06:55	07:17 (38)	07:31	07:11	07:48
	21:12		20:43	19:52	19 07:36 (38)	18:54	17:06	16:46
9	05:49		06:20	06:56	07:18 (38)	07:32	07:13	07:49
	21:12		20:42	19:50	18 07:36 (38)	18:53	17:05	16:45
10	05:50		06:21	06:57	07:19 (38)	07:33	07:14	07:50
	21:11		20:41	19:48	16 07:35 (38)	18:51	17:04	16:45
11	05:51		06:23	06:59	07:20 (38)	07:34	07:15	07:51
	21:11		20:39	19:46	14 07:34 (38)	18:49	17:03	16:45
12	05:52		06:24	07:00	07:21 (38)	07:36	07:17	07:52
	21:10		20:38	19:45	12 07:33 (38)	18:47	17:02	16:46
13	05:52		06:25	07:01	07:22 (38)	07:37	07:18	07:53
	21:10		20:36	19:43	10 07:32 (38)	18:46	17:01	16:46
14	05:53		06:26	07:02	07:23 (38)	07:38	07:19	07:53
	21:09		20:35	19:41	7 07:30 (38)	18:44	16:59	16:46
15	05:54		06:27	07:03	07:24 (38)	07:39	07:21	07:54
	21:08		20:33	19:39	4 07:28 (38)	18:42	16:58	16:46
16	05:55		06:28	07:04	07:26 (38)	07:41	07:22	07:55
	21:08		20:32	19:37	1 07:27 (38)	18:40	16:57	16:46
17	05:56		06:30	07:06		07:42	07:23	07:56
	21:07		20:30	19:35		18:39	16:57	16:46
18	05:57		06:31	07:07		07:43	07:25	07:56
	21:06		20:28	19:33		18:37	16:56	16:47
19	05:58		06:32	07:08		07:45	07:26	07:57
	21:05		20:27	19:31		18:35	16:55	16:47
20	05:59		06:33	07:09		07:46	07:27	07:58
	21:05		20:25	19:30		18:34	16:54	16:48
21	06:00		06:34	07:10		07:47	07:28	07:58
	21:04		20:24	19:28		18:32	16:53	16:48
22	06:01		06:35	07:11		07:48	07:30	07:59
	21:03		20:22	19:26		18:30	16:52	16:49
23	06:02		06:37	07:13		07:50	07:31	07:59
	21:02		20:20	19:24		18:29	16:52	16:49
24	06:03		06:38	19:39 (36)	07:14	07:51	07:32	08:00
	21:01		20:19	8 19:47 (36)	19:22	18:27	16:51	16:50
25	06:04		06:39	19:36 (36)	07:15	07:52	07:34	08:00
	21:00		20:17	13 19:49 (36)	19:20	18:26	16:50	16:50
26	06:05		06:40	19:35 (36)	07:16	07:54	07:35	08:00
	20:59		20:15	15 19:50 (36)	19:18	18:24	16:50	16:51
27	06:06		06:41	19:33 (36)	07:17	07:55	07:36	08:01
	20:58		20:13	15 19:48 (36)	19:16	18:23	16:49	16:52
28	06:07		06:42	19:32 (36)	07:19	07:56	07:37	08:01
	20:57		20:12	15 19:47 (36)	19:15	18:21	16:49	16:52
29	06:08		06:44	19:31 (36)	07:20	07:58	07:38	08:01
	20:56		20:10	14 19:45 (36)	19:13	18:20	16:48	16:53
30	06:09		06:45	19:32 (36)	07:21	07:59	07:40	08:01
	20:55		20:08	12 19:44 (36)	19:11	18:18	16:48	16:54
31	06:10		06:46	07:22 (38)		08:00		08:02
	20:54		20:06	19 19:42 (36)		18:17		16:55
Potential sun hours	470	435		377	341	289		276
Total, worst case	19		111		264			
Sun reduction	0.76		0.74		0.69			
Oper. time red.	0.98		0.98		0.98			
Wind dir. red.	0.69		0.61		0.58			
Total reduction	0.51		0.44		0.39			
Total, real	10		49		103			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H257 - H257

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H258 - H258

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:34	07:04 18:11	07:42 (36) 08:25 (36)	07:08 19:51	06:17 20:28
2	08:02 16:57	07:44 17:35	07:02 18:12	07:42 (36) 08:24 (36)	07:06 19:52	06:15 20:29
3	08:02 16:58	07:42 17:37	07:00 18:14	07:42 (36) 08:23 (36)	07:04 19:53	06:14 20:30
4	08:02 16:59	07:41 17:38	06:59 18:15	07:42 (36) 08:22 (36)	07:02 19:54	06:13 20:31
5	08:02 17:00	07:40 17:39	06:57 18:16	07:43 (36) 08:20 (36)	07:00 19:56	06:11 20:32
6	08:02 17:01	07:39 17:41	06:55 18:18	07:45 (36) 08:19 (36)	06:59 19:57	07:19 (37) 06:10
7	08:02 17:02	07:37 17:42	06:53 18:19	07:46 (36) 08:17 (36)	06:57 19:58	07:17 (37) 06:09
8	08:01 17:03	07:36 17:44	08:03 (36) 08:07 (36)	07:52 18:20	06:55 19:59	07:15 (37) 06:07
9	08:01 17:04	07:35 17:45	07:56 (36) 08:12 (36)	07:50 19:22	06:53 20:01	07:13 (37) 06:06
10	08:01 17:05	07:33 17:46	07:55 (36) 08:15 (36)	07:48 19:23	06:51 20:02	07:12 (37) 06:05
11	08:00 17:06	07:32 17:48	07:53 (36) 08:17 (36)	07:46 19:24	06:50 20:03	07:10 (37) 06:03
12	08:00 17:07	07:31 17:49	07:52 (36) 08:19 (36)	07:44 19:26	06:48 20:04	07:08 (37) 06:02
13	08:00 17:09	07:29 17:51	07:50 (36) 08:20 (36)	07:43 19:27	06:46 20:05	07:06 (37) 06:01
14	07:59 17:10	07:28 17:52	07:49 (36) 08:22 (36)	07:41 19:28	06:44 20:07	07:05 (37) 06:00
15	07:59 17:11	07:26 17:53	07:47 (36) 08:23 (36)	07:39 19:29	06:43 20:08	07:03 (37) 05:59
16	07:58 17:12	07:25 17:55	07:46 (36) 08:24 (36)	07:37 19:31	06:41 20:09	07:01 (37) 05:58
17	07:58 17:13	07:23 17:56	07:44 (36) 08:25 (36)	07:35 19:32	06:39 20:10	07:00 (37) 05:56
18	07:57 17:15	07:22 17:58	07:43 (36) 08:26 (36)	07:34 19:33	06:38 20:12	06:59 (37) 05:55
19	07:56 17:16	07:20 17:59	07:42 (36) 08:26 (36)	07:32 19:34	06:36 20:13	06:59 (37) 05:54
20	07:56 17:17	07:19 18:00	07:42 (36) 08:27 (36)	07:30 19:36	06:34 20:14	07:00 (37) 05:53
21	07:55 17:19	07:17 18:00	07:42 (36) 08:27 (36)	07:28 19:37	06:33 20:15	07:00 (37) 05:52
22	07:54 17:20	07:16 18:02	07:41 (36) 08:26 (36)	07:26 19:38	06:31 20:17	07:01 (37) 05:52
23	07:53 17:21	07:14 18:03	07:41 (36) 08:27 (36)	07:24 19:39	06:29 20:18	07:03 (37) 05:51
24	07:53 17:23	07:12 18:04	07:41 (36) 08:27 (36)	07:22 19:41	06:28 20:19	07:05 (37) 05:50
25	07:52 17:24	07:11 18:06	07:40 (36) 08:26 (36)	07:21 19:42	06:26 20:20	07:16 (37) 05:49
26	07:51 17:25	07:09 18:07	07:41 (36) 08:27 (36)	07:19 19:43	06:25 20:22	05:48 20:56
27	07:50 17:27	07:07 18:08	07:41 (36) 08:26 (36)	07:17 19:44	06:23 20:23	05:47 20:57
28	07:49 17:28	07:06 18:10	07:41 (36) 08:25 (36)	07:15 19:46	06:21 20:24	05:47 20:58
29	07:48 17:30		07:13 19:47	07:13 19:47	06:20 20:25	05:46 20:59
30	07:47 17:31		07:11 19:48	07:11 19:48	06:18 20:26	05:45 21:00
31	07:46 17:32		07:10 19:49	07:10 19:49	05:45 21:01	05:45 21:01
Potential sun hours	287	292	369	403	458	464
Total, worst case		764	341	340		
Sun reduction		0.59	0.59	0.61		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.65	0.65	0.55		
Total reduction		0.38	0.38	0.33		
Total, real		288	128	113		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H258 - H258

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	07:09 (37) 19:09	07:22 17:15	07:02 16:47
2	05:45 21:14	06:12 20:51	06:48 20:03	07:10 (37) 19:07	07:23 17:14	07:03 16:47
3	05:45 21:14	06:14 20:50	06:49 20:01	07:11 (37) 19:05	07:25 17:13	07:05 16:47
4	05:46 21:13	06:15 20:49	06:51 19:59	07:12 (37) 19:04	07:26 17:11	07:06 16:46
5	05:46 21:13	06:16 20:47	06:52 19:58	07:13 (37) 19:02	07:27 17:10	07:07 16:46
6	05:47 21:13	06:17 20:46	06:53 19:56	07:14 (37) 19:00	07:28 17:09	07:09 16:46
7	05:48 21:12	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:08	07:09 16:46
8	05:49 21:12	06:19 20:43	06:55 19:52	07:31 18:55	07:11 17:06	07:09 16:46
9	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53	07:13 17:05	07:09 16:46
10	05:50 21:11	06:22 20:41	06:58 19:48	07:33 18:51	07:14 17:04	07:10 16:46
11	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:15 17:03	07:11 16:46
12	05:52 21:10	06:24 20:38	07:00 19:45	07:36 18:47	07:17 17:02	07:12 16:46
13	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:13 16:46
14	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:19 17:00	07:14 16:46
15	05:54 21:08	06:27 20:33	07:03 19:39	07:40 18:42	07:21 16:59	07:15 16:46
16	05:55 21:08	06:28 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:16 16:46
17	05:56 21:07	06:30 20:30	07:06 19:35	07:42 18:39	07:23 16:57	07:17 16:47
18	05:57 21:06	06:31 20:29	07:07 19:33	07:43 18:37	07:25 16:56	07:18 16:47
19	05:58 21:06	06:32 20:27	07:08 (37) 19:32	07:45 18:35	07:26 16:55	07:19 16:47
20	05:59 21:05	06:33 20:25	07:09 (37) 19:30	07:46 18:34	07:27 16:54	07:20 16:48
21	06:00 21:04	06:34 20:24	07:10 (37) 19:28	07:47 18:32	07:29 16:53	07:21 16:48
22	06:01 21:03	06:35 20:22	07:12 (37) 19:26	07:49 18:31	07:30 16:52	07:22 16:49
23	06:02 21:02	06:37 20:20	07:13 (37) 19:24	07:50 18:29	07:31 16:52	07:23 16:49
24	06:03 21:01	06:38 20:19	07:14 (37) 19:22	07:51 18:27	07:32 16:51	07:24 16:50
25	06:04 21:00	06:39 20:17	07:15 (37) 19:20	07:52 18:26	07:34 16:50	07:25 16:50
26	06:05 20:59	06:40 20:15	07:16 (37) 19:18	07:54 18:24	07:35 16:50	07:26 16:51
27	06:06 20:58	06:41 20:14	07:17 (37) 19:17	07:55 18:23	07:36 16:49	07:27 16:52
28	06:07 20:57	06:42 20:12	07:19 (37) 19:15	07:56 18:21	07:37 16:49	07:28 16:52
29	06:08 20:56	06:44 20:10	07:20 (37) 19:13	07:58 18:20	07:38 16:48	07:29 16:53
30	06:09 20:55	06:45 20:08	07:21 (37) 19:11	07:59 18:18	07:40 16:48	07:30 16:54
31	06:10 20:54	06:46 20:07	07:22 (37) 19:09	08:00 18:17	07:41 16:47	07:31 16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case		287	59	1086	34	
Sun reduction		0.74	0.69	0.63	0.50	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.55	0.55	0.65	0.65	
Total reduction		0.40	0.38	0.40	0.32	
Total, real		116	22	437	11	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H259 - H259

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H260 - H260

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H261 - H261

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H262 - H262

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
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	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H278 - H278

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H279 - H279

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H280 - H280

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H281 - H281

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including sunrise/sunset times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H282 - H282

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H283 - H283

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	07:45	07:04	07:08	07:29 (24)	06:17	05:44	05:44	06:11	06:47	07:30 (24)	07:22	07:02	07:41	
	16:56	17:34	18:11	19:51	44 08:13 (24)	20:28	21:02	21:14	20:53	20:05	34 08:04 (24)	19:09	17:15	16:47	
2	08:02	07:44	07:02	07:06	07:29 (24)	06:15	05:44	05:45	06:12	06:48	07:29 (24)	07:23	07:03	07:42	
	16:57	17:35	18:12	19:52	44 08:13 (24)	20:29	21:02	21:14	20:51	20:03	35 08:04 (24)	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:04	07:28 (24)	06:14	05:43	05:45	06:14	06:49	07:27 (24)	07:25	07:05	07:43	
	16:58	17:36	18:14	19:53	44 08:12 (24)	20:30	21:03	21:14	20:50	20:01	38 08:05 (24)	19:05	17:13	16:47	
4	08:02	07:41	06:59	07:02	07:28 (24)	06:13	05:43	05:46	06:15	06:51	07:26 (24)	07:26	07:06	07:44	
	16:59	17:38	18:15	19:54	44 08:12 (24)	20:31	21:04	21:13	20:49	19:59	39 08:05 (24)	19:04	17:11	16:46	
5	08:02	07:40	06:57	07:00	07:28 (24)	06:11	05:42	05:46	06:16	06:52	07:25 (24)	07:27	07:07	07:45	
	17:00	17:39	18:16	19:56	43 08:11 (24)	20:33	21:05	21:13	20:48	19:58	41 08:06 (24)	19:02	17:10	16:46	
6	08:02	07:39	06:55	06:59	07:29 (24)	06:10	05:42	05:47	06:17	06:53	07:24 (24)	07:28	07:09	07:46	
	17:01	17:41	18:18	19:57	42 08:11 (24)	20:34	21:06	21:13	20:46	19:56	42 08:06 (24)	19:00	17:09	16:46	
7	08:02	07:37	06:53	06:57	07:29 (24)	06:08	05:41	05:48	06:18	06:54	07:24 (24)	07:30	07:10	07:47	
	17:02	17:42	18:19	19:58	41 08:10 (24)	20:35	21:06	21:13	20:45	19:54	43 08:07 (24)	18:56	17:08	16:46	
8	08:01	07:36	07:52	06:55	07:29 (24)	06:07	05:41	05:48	06:19	06:55	07:23 (24)	07:31	07:11	07:48	
	17:03	17:44	18:20	19:59	39 08:08 (24)	20:36	21:07	21:12	20:43	19:52	44 08:07 (24)	18:55	17:06	16:46	
9	08:01	07:35	07:50	06:53	07:29 (24)	06:06	05:41	05:49	06:20	06:56	07:22 (24)	07:32	07:13	07:49	
	17:04	17:45	19:22	20:01	38 08:07 (24)	20:37	21:08	21:12	20:42	19:50	44 08:06 (24)	18:53	17:05	16:46	
10	08:01	07:33	07:48	06:51	07:31 (24)	06:05	05:41	05:50	06:21	06:58	07:22 (24)	07:33	07:14	07:50	
	17:05	17:46	19:23	20:02	35 08:06 (24)	20:38	21:08	21:11	20:41	19:48	44 08:06 (24)	18:51	17:04	16:45	
11	08:01	07:32	07:46	06:50	07:31 (24)	06:03	05:40	05:51	06:23	06:59	07:21 (24)	07:35	07:15	07:51	
	17:06	17:48	19:24	20:03	34 08:05 (24)	20:40	21:09	21:11	20:39	19:47	45 08:06 (24)	18:49	17:03	16:45	
12	08:00	07:31	07:44	06:48	07:32 (24)	06:02	05:40	05:52	06:24	07:00	07:21 (24)	07:36	07:17	07:52	
	17:07	17:49	19:26	20:04	31 08:03 (24)	20:41	21:10	21:10	20:38	19:45	44 08:05 (24)	18:47	17:02	16:46	
13	08:00	07:29	07:43	06:46	07:33 (24)	06:01	05:40	05:52	06:25	07:01	07:22 (25)	07:37	07:18	07:53	
	17:08	17:51	19:27	20:06	27 08:00 (24)	20:42	21:10	21:10	20:36	19:43	42 08:04 (24)	18:46	17:01	16:46	
14	07:59	07:28	07:41	06:44	07:36 (24)	06:00	05:40	05:53	06:26	07:02	07:23 (25)	07:38	07:19	07:54	
	17:10	17:52	19:28	20:07	23 07:59 (24)	20:43	21:11	21:09	20:35	19:41	41 08:04 (24)	18:44	17:00	16:46	
15	07:59	07:26	07:39	06:43	07:38 (24)	05:59	05:40	05:54	06:27	07:03	07:25 (25)	07:40	07:21	07:54	
	17:11	17:53	19:29	20:08	18 07:56 (24)	20:44	21:11	21:09	20:33	19:39	39 08:04 (24)	18:42	16:59	16:46	
16	07:58	07:25	07:37	06:41	07:42 (24)	05:57	05:40	05:55	06:28	07:05	07:26 (25)	07:41	07:22	07:55	
	17:12	17:55	19:31	20:09	9 07:51 (24)	20:45	21:12	21:08	20:32	19:37	37 08:03 (24)	18:40	16:58	16:46	
17	07:58	07:23	07:35	06:39	07:43 (24)	05:56	05:40	05:56	06:30	07:06	07:27 (25)	07:42	07:23	07:56	
	17:13	17:56	19:32	20:10	20:47	21:12	21:12	21:07	20:30	19:35	34 08:01 (24)	18:39	16:57	16:47	
18	07:57	07:22	07:34	06:38	07:44 (24)	05:55	05:40	05:57	06:31	07:07	07:28 (25)	07:43	07:25	07:56	
	17:15	17:58	19:33	20:12	20:48	21:12	21:12	21:06	20:29	19:33	32 08:00 (24)	18:37	16:56	16:47	
19	07:56	07:20	07:32	06:36	07:52 (24)	06:36	05:54	05:58	06:32	07:08	07:29 (25)	07:45	07:26	07:57	
	17:16	17:59	19:34	10 08:02 (24)	20:13	20:49	21:13	21:06	20:27	19:32	29 07:58 (24)	18:35	16:55	16:47	
20	07:56	07:19	07:30	06:34	07:50 (25)	06:34	05:53	05:40	05:59	06:33	07:09	07:30 (25)	07:46	07:27	07:58
	17:17	18:00	19:36	15 08:05 (24)	20:14	20:50	21:13	21:05	20:25	19:30	27 07:57 (24)	18:34	16:54	16:48	
21	07:55	07:17	07:28	06:33	07:48 (25)	06:33	05:52	05:40	06:00	06:34	07:10	07:31 (25)	07:47	07:29	07:58
	17:19	18:00	19:37	19 08:07 (24)	20:15	20:51	21:13	21:04	20:24	19:28	24 07:55 (24)	18:32	16:53	16:48	
22	07:54	07:16	07:26	06:31	07:46 (25)	06:31	05:51	05:41	06:01	06:35	07:12	07:33 (25)	07:49	07:30	07:59
	17:20	18:02	19:38	23 08:09 (24)	20:17	20:52	21:13	21:03	20:22	19:26	20 07:53 (24)	18:31	16:52	16:49	
23	07:53	07:14	07:24	06:29	07:44 (25)	06:29	05:51	05:41	06:02	06:37	07:13	07:34 (25)	07:50	07:31	07:59
	17:21	18:03	19:39	26 08:10 (24)	20:18	20:53	21:14	21:02	20:20	19:24	16 07:50 (24)	18:29	16:52	16:49	
24	07:53	07:12	07:22	06:28	07:43 (25)	06:28	05:50	05:41	06:03	06:38	07:14	07:35 (24)	07:51	07:32	08:00
	17:23	18:04	19:41	29 08:12 (24)	20:19	20:54	21:14	21:01	20:19	19:22	12 07:47 (24)	18:27	16:51	16:50	
25	07:52	07:11	07:21	06:26	07:41 (25)	06:26	05:49	05:41	06:04	06:39	07:15	07:36 (24)	07:53	07:34	08:00
	17:24	18:06	19:42	31 08:12 (24)	20:20	20:55	21:14	21:00	20:17	19:20		18:26	16:50	16:50	
26	07:51	07:09	07:19	06:24	07:39 (25)	06:24	05:48	05:42	06:05	06:40	07:16	07:37 (24)	07:54	07:35	08:00
	17:25	18:07	19:43	34 08:13 (24)	20:22	20:56	21:14	20:59	20:15	19:18		18:24	16:50	16:51	
27	07:50	07:07	07:17	06:23	07:37 (25)	06:23	05:47	05:42	06:06	06:41	07:17	07:38 (24)	07:55	07:36	08:01
	17:27	18:08	19:44	36 08:13 (24)	20:23	20:57	21:14	20:58	20:14	10 07:53 (24)	19:17	18:23	16:49	16:52	
28	07:49	07:06	07:15	06:21	07:35 (25)	06:21	05:47	05:43	06:07	06:42	07:38 (24)	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	38 08:13 (24)	20:24	20:58	21:14	20:57	20:12	19 07:57 (24)	19:15	18:21	16:49	16:52	
29	07:48	07:13	07:23	06:20	07:33 (25)	06:20	05:46	05:43	06:08	06:44	07:36 (24)	07:20	07:58	07:39	08:01
	17:29	18:11	19:47	40 08:13 (24)	20:25	20:59	21:14	20:56	20:10	24 08:00 (24)	19:13	18:20	16:48	16:53	
30	07:47	07:11	07:21	06:18	07:31 (25)	06:18	05:45	05:44	06:09	06:45	07:34 (24)	07:21	07:59	07:40	08:02
	17:31	18:13	19:48	42 08:13 (24)	20:26	21:00	21:14	20:55	20:08	27 08:01 (24)	19:11	18:18	16:48	16:54	
31	07:46	07:10	07:20	06:17	07:30 (24)	06:17	05:45	06:10	06:46	07:32 (24)		08:00		08:02	
	17:32	18:14	19:49	44 08:14 (24)	20:27	21:01	21:14	20:54	20:07	31 08:03 (24)		18:17	16:55	16:55	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276			
Total, worst case			387	556				111	846						
Sun reduction			0.59	0.61				0.74	0.69						
Oper. time red.			0.98	0.98				0.98	0.98						
Wind dir. red.			0.60	0.60				0.60	0.60						
Total reduction			0.34	0.36				0.43	0.40						
Total, real			133	198				48	340						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H284 - H284

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December					
1	08:02	08:26 (26)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	08:06 (26)			
	16:56	14	08:40 (26)	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	18	08:24 (26)		
2	08:02	08:26 (26)	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42	18	08:07 (26)		
	16:57	14	08:40 (26)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	18	08:25 (26)		
3	08:02	08:26 (26)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43	18	08:08 (26)		
	16:58	15	08:41 (26)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	17	08:25 (26)		
4	08:02	08:26 (26)	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44	17	08:10 (26)		
	16:59	15	08:41 (26)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	17	08:27 (26)		
5	08:02	08:26 (26)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	17	08:11 (26)		
	17:00	15	08:41 (26)	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16	08:27 (26)		
6	08:02	08:26 (26)	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46	16	08:12 (26)		
	17:01	16	08:42 (26)	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16	08:28 (26)		
7	08:02	08:25 (26)	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47	16	08:13 (26)		
	17:02	16	08:41 (26)	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16	08:29 (26)		
8	08:01	08:25 (26)	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	16	08:14 (26)		
	17:03	17	08:42 (26)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16	08:29 (26)		
9	08:01	08:25 (26)	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49	15	08:15 (26)		
	17:04	17	08:42 (26)	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16	08:30 (26)		
10	08:01	08:24 (26)	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50	15	08:16 (26)		
	17:05	18	08:42 (26)	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16	08:30 (26)		
11	08:01	08:24 (26)	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51	14	08:17 (26)		
	17:06	18	08:42 (26)	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	14	08:31 (26)		
12	08:00	08:24 (26)	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52	14	08:17 (26)		
	17:07	18	08:42 (26)	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	13	08:30 (26)		
13	08:00	08:25 (26)	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53	13	08:18 (26)		
	17:08	17	08:42 (26)	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	13	08:31 (26)		
14	07:59	08:27 (26)	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54	13	08:19 (26)		
	17:10	15	08:42 (26)	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	13	08:32 (26)		
15	07:59	08:28 (26)	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54	13	08:20 (26)		
	17:11	13	08:41 (26)	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	12	08:32 (26)		
16	07:58	08:29 (26)	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55	12	08:21 (26)		
	17:12	10	08:39 (26)	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	12	08:33 (26)		
17	07:58	08:32 (26)	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56	12	08:21 (26)		
	17:13	6	08:38 (26)	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	12	08:33 (26)		
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56	07:56	12	08:22 (26)		
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47	12	08:34 (26)			
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57	07:57	12	08:22 (26)		
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47	12	08:34 (26)			
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58	07:58	12	08:23 (26)		
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48	12	08:35 (26)			
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58	07:58	11	08:24 (26)		
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48	11	08:35 (26)			
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59	07:59	11	08:24 (26)		
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:48	11	08:35 (26)			
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59	07:59	11	08:24 (26)		
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49	11	08:35 (26)			
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00	08:00	11	08:25 (26)		
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50	12	08:37 (26)			
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:10 (26)	08:00	12	08:25 (26)		
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	6	08:16 (26)	16:50	12	08:37 (26)	
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:08 (26)	08:00	12	08:25 (26)		
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:15	19:18	18:24	16:50	10	08:18 (26)	16:51	12	08:37 (26)	
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:07 (26)	08:01	12	08:26 (26)		
	17:27	18:08	19:44	20:23	20:57	21:14	21:00	20:14	19:17	18:23	16:49	13	08:20 (26)	16:52	12	08:38 (26)	
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:06 (26)	08:01	12	08:26 (26)		
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	15	08:21 (26)	16:52	12	08:38 (26)	
29	07:48	07:13	07:23	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:06 (26)	08:01	12	08:26 (26)		
	17:29	19:47	20:25	20:59	21:14	21:14	20:56	20:10	19:13	18:20	16:48	17	08:23 (26)	16:53	13	08:39 (26)	
30	07:47	07:11	07:21	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:05 (26)	08:02	13	08:26 (26)		
	17:31	19:48	20:26	21:00	21:14	21:14	20:55	20:08	19:11	18:18	16:48	18	08:23 (26)	16:54	13	08:39 (26)	
31	07:46	07:09	07:19	06:15	05:45	05:45	06:10	06:46	07:22	08:00	07:41	08:02	08:02	13	08:26 (26)		
	17:32	19:49	20:27	21:01	21:14	21:14	20:54	20:07	19:10	18:17	16:48	16:55	13	08:39 (26)	16:55	13	08:39 (26)
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	419				
Total, worst case	254										79		419				
Sun reduction	0.57										0.50		0.49				
Oper. time red.	0.98										0.98		0.98				
Wind dir. red.	0.70										0.70		0.70				
Total reduction	0.39										0.34		0.33				
Total, real	99										27		140				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H285 - H285

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	15:50 (24)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	15:42 (24)
	16:56	26 16:16 (24)	17:34	18:11	19:51	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47	15 15:57 (24)
2	08:02	15:51 (24)	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	15:41 (24)
	16:57	25 16:16 (24)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	17 15:58 (24)
3	08:02	15:51 (24)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43	15:41 (24)
	16:58	25 16:16 (24)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46	18 15:59 (24)
4	08:02	15:52 (24)	07:41	06:59	07:02	06:12	05:43	05:46	06:15	06:51	07:26	07:06	07:44	15:40 (24)
	16:59	25 16:17 (24)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46	20 16:00 (24)
5	08:02	15:53 (24)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	15:41 (24)
	17:00	24 16:17 (24)	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46	21 16:02 (24)
6	08:02	15:54 (24)	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46	15:41 (24)
	17:01	23 16:17 (24)	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46	22 16:03 (24)
7	08:02	15:55 (24)	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47	15:40 (24)
	17:02	21 16:16 (24)	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46	24 16:04 (24)
8	08:01	15:56 (24)	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	15:40 (24)
	17:03	20 16:16 (24)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45	25 16:05 (24)
9	08:01	15:57 (24)	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49	15:40 (24)
	17:04	19 16:16 (24)	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45	25 16:05 (24)
10	08:01	15:58 (24)	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50	15:41 (24)
	17:05	17 16:15 (24)	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45	25 16:06 (24)
11	08:00	16:00 (24)	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51	15:41 (24)
	17:06	15 16:15 (24)	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45	26 16:07 (24)
12	08:00	16:02 (24)	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52	15:40 (24)
	17:07	12 16:14 (24)	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:45	27 16:07 (24)
13	08:00	16:04 (24)	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53	15:41 (24)
	17:08	8 16:12 (24)	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:46	26 16:07 (24)
14	07:59		07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54	15:41 (24)
	17:10		17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46	27 16:08 (24)
15	07:59		07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54	15:42 (24)
	17:11		17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46	27 16:09 (24)
16	07:58		07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55	15:41 (24)
	17:12		17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:57	16:46	28 16:09 (24)
17	07:58		07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56	15:42 (24)
	17:13		17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46	28 16:10 (24)
18	07:57		07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56	15:43 (24)
	17:15		17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47	28 16:11 (24)
19	07:56		07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57	15:43 (24)
	17:16		17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47	28 16:11 (24)
20	07:56		07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58	15:43 (24)
	17:17		18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48	29 16:12 (24)
21	07:55		07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58	15:43 (24)
	17:18		18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48	29 16:12 (24)
22	07:54		07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:49	07:30	07:59	15:44 (24)
	17:20		18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48	29 16:13 (24)
23	07:53		07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59	15:44 (24)
	17:21		18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49	29 16:13 (24)
24	07:53		07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00	15:46 (24)
	17:23		18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50	28 16:14 (24)
25	07:52		07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00	15:46 (24)
	17:24		18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	28 16:14 (24)
26	07:51		07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00	15:46 (24)
	17:25		18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51	28 16:14 (24)
27	07:50		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01	15:47 (24)
	17:27		18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51	28 16:15 (24)
28	07:49		07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01	15:48 (24)
	17:28		18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52	27 16:15 (24)
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38		08:01	15:48 (24)
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	8 15:53 (24)	16:53	27 16:15 (24)
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	15:43 (24)	08:01	15:48 (24)
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	12 15:55 (24)	16:54	27 16:15 (24)
31	07:46		07:09	06:16	05:43	05:41	06:06	06:42	07:18	07:56	07:36		08:02	15:49 (24)
	17:32		19:49	20:27	21:01	21:15	20:54	20:07	19:10	18:17	16:48		16:55	27 16:16 (24)
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	793	
Total, worst case	260										20		0.50	0.49
Sun reduction	0.57										0.98		0.98	0.98
Oper. time red.	0.98										0.55		0.55	0.55
Wind dir. red.	0.55										0.27		0.26	0.26
Total reduction	0.31										0.27		0.26	0.26
Total, real	80										5		209	209

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H286 - H286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51		06:17 20:28		05:44 20:09 (24)
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52		06:15 20:29	17	05:43 20:10 (24)
3	08:02 16:58	07:42 17:36	07:00 18:14	07:04 19:53		06:14 20:30	16	05:43 20:10 (24)
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54		06:12 20:31	14	05:43 20:12 (24)
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	07:20 (27) 07:23 (27)	06:11 20:32	12	05:42 20:13 (24)
6	08:02 17:01	07:39 17:41	06:55 18:18	06:58 19:57	07:19 (27) 07:25 (27)	06:10 20:34	11	05:42 20:14 (24)
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	07:17 (27) 07:25 (27)	06:08 20:35	8	05:41 20:15 (24)
8	08:01 17:03	07:36 17:43	07:52 18:20	06:55 19:59	07:15 (27) 07:25 (27)	06:07 20:36	6	05:41 20:11 (24)
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	07:13 (27) 07:25 (27)	06:06 20:37	4	05:41 20:09 (24)
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	07:11 (27) 07:25 (27)	06:04 20:38	6	05:41 20:08 (24)
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	07:10 (27) 07:25 (27)	06:03 20:40	8	05:40 20:07 (24)
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	07:08 (27) 07:24 (27)	06:02 20:41	11	05:40 20:06 (24)
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:05	07:06 (27) 07:23 (27)	06:01 20:42	13	05:40 20:05 (24)
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	07:05 (27) 07:22 (27)	06:00 20:43	14	05:40 20:19 (24)
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	07:06 (27) 07:21 (27)	05:59 20:44	15	05:40 20:04 (24)
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	07:07 (27) 07:19 (27)	05:57 20:45	17	05:40 20:03 (24)
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	07:10 (27) 07:15 (27)	05:56 20:46	18	05:40 20:02 (24)
18	07:57 17:15	07:22 17:57	07:33 19:33	06:37 20:12		05:55 20:48	19	05:40 20:01 (24)
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13		05:54 20:49	20	05:40 20:00 (24)
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14		05:53 20:50	21	05:40 20:00 (24)
21	07:55 17:19	07:17 18:00	07:28 19:37	06:32 20:15		05:52 20:51	22	05:40 20:00 (24)
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:17		05:51 20:52	23	05:41 20:00 (24)
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18		05:51 20:53	23	05:41 20:00 (24)
24	07:53 17:23	07:12 18:04	07:22 19:41	06:28 20:19		05:50 20:54	24	05:41 20:00 (24)
25	07:52 17:24	07:11 18:06	07:20 19:42	06:26 20:20		05:49 20:55	24	05:41 20:00 (24)
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:21		05:48 20:56	23	05:42 20:00 (24)
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23		05:47 20:57	23	05:42 20:00 (24)
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24		05:47 20:58	21	05:43 20:00 (24)
29	07:48 17:29		07:13 19:47	06:20 20:25		05:46 20:59	20	05:43 20:00 (24)
30	07:47 17:31		07:11 19:48	06:18 20:26		05:45 21:00	19	05:43 20:00 (24)
31	07:46 17:32		07:09 19:49			05:45 21:01	19	05:43 20:00 (24)
Potential sun hours	287	292	369	403	458		464	
Total, worst case				150	408		84	
Sun reduction				0.61	0.65		0.70	
Oper. time red.				0.98	0.98		0.98	
Wind dir. red.				0.56	0.66		0.66	
Total reduction				0.33	0.42		0.45	
Total, real				50	171		38	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H286 - H286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44 21:14	06:11 20:52	10 20:17 (24) 20:05	06:47 20:05	15 07:09 (27) 07:24 (27)	07:22 19:09	07:02 17:15	07:41 16:47
2	05:45 21:14	06:12 20:51	8 20:18 (24) 20:03	06:48 20:03	14 07:10 (27) 07:24 (27)	07:23 19:07	07:03 17:14	07:42 16:47
3	05:45 21:14	06:13 20:50	5 20:19 (24) 20:01	06:49 20:01	12 07:11 (27) 07:23 (27)	07:25 19:05	07:04 17:13	07:43 16:46
4	05:46 21:13	06:15 20:49	3 20:20 (24) 20:23 (24)	06:51 19:59	11 07:12 (27) 07:23 (27)	07:26 19:04	07:06 17:11	07:44 16:46
5	05:46 21:13	20:23 (24) 20:27 (24)	06:16 20:47	06:52 19:58	8 07:13 (27) 07:21 (27)	07:27 19:02	07:07 17:10	07:45 16:46
6	05:47 21:13	8 20:20 (24) 20:28 (24)	06:17 20:46	06:53 19:56	6 07:14 (27) 07:20 (27)	07:28 19:00	07:08 17:09	07:46 16:46
7	05:48 21:12	10 20:20 (24) 20:30 (24)	06:18 20:45	06:54 19:54	3 07:15 (27) 07:18 (27)	07:29 18:56	07:10 17:07	07:47 16:46
8	05:48 21:12	12 20:19 (24) 20:31 (24)	06:19 20:43	06:55 19:52	07:31 18:54	07:11 17:06	07:48 16:45	07:48 16:45
9	05:49 21:12	13 20:18 (24) 20:31 (24)	06:20 20:42	06:56 19:50	07:32 18:53	07:13 17:05	07:49 16:45	07:49 16:45
10	05:50 21:11	16 20:17 (24) 20:33 (24)	06:21 20:41	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45	07:50 16:45
11	05:51 21:11	17 20:17 (24) 20:34 (24)	06:23 20:39	06:59 19:46	07:34 18:49	07:15 17:03	07:51 16:45	07:51 16:45
12	05:51 21:10	18 20:17 (24) 20:35 (24)	06:24 20:38	07:00 19:45	07:36 18:47	07:17 17:02	07:52 16:45	07:52 16:45
13	05:52 21:10	19 20:16 (24) 20:35 (24)	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:53 16:46	07:53 16:46
14	05:53 21:09	20 20:15 (24) 20:35 (24)	06:26 20:35	07:02 19:41	07:38 18:44	07:19 16:59	07:54 16:46	07:54 16:46
15	05:54 21:08	21 20:15 (24) 20:36 (24)	06:27 20:33	07:03 19:39	07:39 18:42	07:21 16:58	07:54 16:46	07:54 16:46
16	05:55 21:08	22 20:15 (24) 20:37 (24)	06:28 20:32	07:04 19:37	07:41 18:40	07:22 16:57	07:55 16:46	07:55 16:46
17	05:56 21:07	22 20:15 (24) 20:37 (24)	06:30 20:30	07:06 19:35	07:42 18:39	07:23 16:57	07:56 16:46	07:56 16:46
18	05:57 21:06	23 20:15 (24) 20:38 (24)	06:31 20:28	07:07 19:33	07:43 18:37	07:25 16:56	07:56 16:47	07:56 16:47
19	05:58 21:06	23 20:15 (24) 20:38 (24)	06:32 20:27	07:08 19:32	07:45 18:35	07:26 16:55	07:57 16:47	07:57 16:47
20	05:59 21:05	23 20:15 (24) 20:38 (24)	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:48	07:58 16:48
21	06:00 21:04	24 20:13 (24) 20:37 (24)	06:34 20:24	07:10 19:28	07:47 18:32	07:28 16:53	07:58 16:48	07:58 16:48
22	06:01 21:03	23 20:13 (24) 20:36 (24)	06:35 20:22	07:11 19:26	07:48 18:30	07:30 16:52	07:59 16:48	07:59 16:48
23	06:02 21:02	22 20:13 (24) 20:35 (24)	06:37 20:20	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49	07:59 16:49
24	06:03 21:01	21 20:13 (24) 20:34 (24)	06:38 20:19	07:14 19:22	07:51 18:27	07:32 16:51	08:00 16:50	08:00 16:50
25	06:04 21:00	20 20:13 (24) 20:33 (24)	06:39 20:17	07:15 19:20	07:52 18:26	07:34 16:50	08:00 16:50	08:00 16:50
26	06:05 20:59	18 20:14 (24) 20:32 (24)	06:40 20:15	6 07:12 (27) 07:18 (27)	07:16 19:18	07:35 16:50	08:00 16:51	08:00 16:51
27	06:06 20:58	17 20:14 (24) 20:31 (24)	06:41 20:13	12 07:09 (27) 07:21 (27)	07:17 19:16	07:36 18:23	08:01 16:49	08:01 16:52
28	06:07 20:57	16 20:14 (24) 20:30 (24)	06:42 20:12	15 07:07 (27) 07:22 (27)	07:19 19:15	07:37 18:21	08:01 16:49	08:01 16:52
29	06:08 20:56	15 20:14 (24) 20:29 (24)	06:44 20:10	18 07:05 (27) 07:23 (27)	07:20 19:13	07:38 18:20	08:01 16:48	08:01 16:53
30	06:09 20:55	13 20:15 (24) 20:28 (24)	06:45 20:08	17 07:07 (27) 07:24 (27)	07:21 19:11	07:40 18:18	08:01 16:48	08:01 16:54
31	06:10 20:54	12 20:16 (24) 20:28 (24)	06:46 20:06	16 07:08 (27) 07:24 (27)	07:22 19:10	08:00 18:17	08:02 16:55	08:02 16:55
Potential sun hours	471	435	377	341	289	276		
Total, worst case	472	110	69					
Sun reduction	0.76	0.74	0.69					
Oper. time red.	0.98	0.98	0.98					
Wind dir. red.	0.66	0.58	0.56					
Total reduction	0.49	0.42	0.38					
Total, real	231	46	26					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H287 - H287

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	08:26 (42)	07:44	07:04	07:07	06:17
	16:56	15	08:41 (42)	17:33	18:11	19:50
2	08:02	08:26 (42)	07:43	07:02	07:06	06:15
	16:57	16	08:42 (42)	17:35	18:12	19:52
3	08:02	08:26 (42)	07:42	07:00	07:04	06:14
	16:57	17	08:43 (42)	17:36	18:14	19:53
4	08:02	08:26 (42)	07:41	06:59	07:02	06:12
	16:58	17	08:43 (42)	17:38	18:15	19:54
5	08:02	08:26 (42)	07:40	06:57	07:00	06:11
	16:59	18	08:44 (42)	17:39	18:16	19:55
6	08:02	08:26 (42)	07:39	06:55	06:58	06:10
	17:00	18	08:44 (42)	17:41	18:18	19:57
7	08:01	08:25 (42)	07:37	06:53	06:57	06:08
	17:01	19	08:44 (42)	17:42	18:19	19:58
8	08:01	08:25 (42)	07:36	07:51	06:55	19:26 (27)
	17:03	19	08:44 (42)	17:43	18:20	19:59
9	08:01	08:25 (42)	07:35	07:50	06:53	19:21 (27)
	17:04	20	08:45 (42)	17:45	19:21	20:00
10	08:01	08:24 (42)	07:33	07:48	06:51	19:18 (27)
	17:05	21	08:45 (42)	17:46	19:23	20:02
11	08:00	08:24 (42)	07:32	07:46	06:49	19:16 (27)
	17:06	21	08:45 (42)	17:48	19:24	20:03
12	08:00	08:24 (42)	07:31	07:44	06:48	19:14 (27)
	17:07	21	08:45 (42)	17:49	19:25	20:04
13	08:00	08:25 (42)	07:29	07:42	06:46	19:13 (27)
	17:08	20	08:45 (42)	17:50	19:27	20:05
14	07:59	08:26 (42)	07:28	07:41	06:44	19:11 (27)
	17:09	19	08:45 (42)	17:52	19:28	20:07
15	07:59	08:27 (42)	07:26	07:39	06:42	19:11 (27)
	17:11	18	08:45 (42)	17:53	19:29	20:08
16	07:58	08:28 (42)	07:25	07:37	06:41	19:09 (27)
	17:12	16	08:44 (42)	17:55	19:30	20:09
17	07:57	08:29 (42)	07:23	07:35	06:39	19:08 (27)
	17:13	14	08:43 (42)	17:56	19:32	20:10
18	07:57	08:31 (42)	07:22	07:33	06:37	19:08 (27)
	17:14	12	08:43 (42)	17:57	19:33	20:11
19	07:56	08:32 (42)	07:20	07:31	06:36	19:07 (27)
	17:16	10	08:42 (42)	17:59	19:34	20:13
20	07:56	08:35 (42)	07:19	07:30	06:34	19:07 (27)
	17:17	4	08:39 (42)	18:00	19:36	20:14
21	07:55		07:17	07:28	06:32	19:07 (27)
	17:18		18:00	19:37	20:15	40
22	07:54		07:15	07:26	06:31	19:06 (27)
	17:20		18:01	19:38	20:16	40
23	07:53		07:14	07:24	06:29	19:07 (27)
	17:21		18:03	19:39	20:18	40
24	07:52		07:12	07:22	06:27	19:06 (27)
	17:22		18:04	19:41	20:19	40
25	07:52		07:10	07:20	06:26	19:06 (27)
	17:24		18:06	19:42	20:20	39
26	07:51		07:09	07:19	06:24	19:07 (27)
	17:25		18:07	19:43	20:21	38
27	07:50		07:07	07:17	06:23	19:07 (27)
	17:27		18:08	19:44	20:23	37
28	07:49		07:05	07:15	06:21	19:07 (27)
	17:28		18:10	19:46	20:24	36
29	07:48			07:13	06:20	19:08 (27)
	17:29			19:47	20:25	35
30	07:47			07:11	06:18	19:09 (27)
	17:31			19:48	20:26	33
31	07:46			07:09		
	17:32			19:49		
Potential sun hours	287	292	369	403	458	464
Total, worst case	335			768	151	
Sun reduction	0.57			0.61	0.65	
Oper. time red.	0.98			0.98	0.98	
Wind dir. red.	0.70			0.62	0.62	
Total reduction	0.39			0.37	0.40	
Total, real	131			285	60	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H287 - H287

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	19:15 (27) 19:40 (27)	07:22 19:09	07:02 17:15
2	05:44 21:14	06:12 20:51	06:48 20:03	19:17 (27) 19:38 (27)	07:23 19:07	07:03 17:14
3	05:45 21:13	06:13 20:50	06:49 20:01	19:19 (27) 19:36 (27)	07:25 19:05	07:04 17:13
4	05:46 21:13	06:14 20:49	06:50 19:59	19:23 (27) 19:31 (27)	07:26 19:03	07:06 17:11
5	05:46 21:13	06:16 20:47	06:52 19:57		07:27 19:02	07:07 17:10
6	05:47 21:13	06:17 20:46	06:53 19:56	19:29 (27) 19:40 (27)	07:28 19:00	07:08 17:09
7	05:48 21:12	06:18 20:45	06:54 19:54	19:26 (27) 19:43 (27)	07:29 18:56	07:10 17:07
8	05:48 21:12	06:19 20:43	06:55 19:52	19:24 (27) 19:45 (27)	07:31 18:54	07:11 17:06
9	05:49 21:12	06:20 20:42	06:56 19:50	19:22 (27) 19:46 (27)	07:32 18:53	07:12 17:05
10	05:50 21:11	06:21 20:40	06:57 19:48	19:20 (27) 19:47 (27)	07:33 18:51	07:14 17:04
11	05:51 21:11	06:22 20:39	06:59 19:46	19:19 (27) 19:48 (27)	07:34 18:49	07:15 17:03
12	05:51 21:10	06:24 20:38	07:00 19:45	19:17 (27) 19:49 (27)	07:36 18:47	07:16 17:01
13	05:52 21:10	06:25 20:36	07:01 19:43	19:17 (27) 19:50 (27)	07:37 18:45	07:18 17:00
14	05:53 21:09	06:26 20:35	07:02 19:41	19:16 (27) 19:51 (27)	07:38 18:44	07:19 16:59
15	05:54 21:08	06:27 20:33	07:03 19:39	19:15 (27) 19:51 (27)	07:39 18:42	07:21 16:58
16	05:55 21:08	06:28 20:31	07:04 19:37	19:14 (27) 19:51 (27)	07:41 18:40	07:22 16:57
17	05:56 21:07	06:29 20:30	07:06 19:35	19:13 (27) 19:52 (27)	07:42 18:39	07:23 16:56
18	05:57 21:06	06:31 20:28	07:07 19:33	19:13 (27) 19:52 (27)	07:43 18:37	07:24 16:55
19	05:58 21:05	06:32 20:27	07:08 19:31	19:12 (27) 19:52 (27)	07:44 18:35	07:26 16:55
20	05:59 21:05	06:33 20:25	07:09 19:30	19:11 (27) 19:51 (27)	07:46 18:34	07:27 16:54
21	06:00 21:04	06:34 20:23	07:10 19:28	19:11 (27) 19:51 (27)	07:47 18:32	07:28 16:53
22	06:01 21:03	06:35 20:22	07:11 19:26	19:12 (27) 19:52 (27)	07:48 18:30	07:30 16:52
23	06:02 21:02	06:36 20:20	07:13 19:24	19:11 (27) 19:51 (27)	07:50 18:29	07:31 16:51
24	06:03 21:01	06:38 20:19	07:14 19:22	19:11 (27) 19:51 (27)	07:51 18:27	07:32 16:51
25	06:04 21:00	06:39 20:17	07:15 19:20	19:11 (27) 19:50 (27)	07:52 18:26	07:33 16:50
26	06:05 20:59	06:40 20:15	07:16 19:18	19:11 (27) 19:49 (27)	07:54 18:24	07:35 16:50
27	06:06 20:58	06:41 20:13	07:17 19:16	19:11 (27) 19:48 (27)	07:55 18:23	07:36 16:49
28	06:07 20:57	06:42 20:12	07:18 19:15	19:12 (27) 19:47 (27)	07:56 18:21	07:37 16:48
29	06:08 20:56	06:43 20:10	07:20 19:13	19:12 (27) 19:45 (27)	07:58 18:20	07:38 16:48
30	06:09 20:55	06:45 20:08	07:21 19:11	19:13 (27) 19:43 (27)	07:59 18:18	07:39 16:47
31	06:10 20:54	06:46 20:06	07:22 19:11	19:14 (27) 19:42 (27)	08:00 18:17	08:01 16:55
Potential sun hours	471	435	377	341	289	276
Total, worst case		860	71		134	474
Sun reduction		0.74	0.69		0.50	0.49
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.62	0.62		0.70	0.70
Total reduction		0.45	0.42		0.34	0.34
Total, real		387	30		46	160

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H288 - H288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	08:26 (29)	07:45	07:04	07:08	06:17
	16:56	27 08:53 (29)	17:33	18:11	19:51	20:28
2	08:02	08:26 (29)	07:43	07:02	07:06	06:15
	16:57	27 08:53 (29)	17:35	18:12	19:52	20:29
3	08:02	08:26 (29)	07:42	07:00	07:04	06:14
	16:57	28 08:54 (29)	17:36	18:14	19:53	20:30
4	08:02	08:26 (29)	07:41	06:59	07:02	06:12
	16:58	28 08:54 (29)	17:38	18:15	19:54	20:31
5	08:02	08:26 (29)	07:40	06:57	07:00	06:11
	16:59	29 08:55 (29)	17:39	18:16	19:55	20:32
6	08:02	08:27 (29)	07:39	06:55	06:58	06:10
	17:00	28 08:55 (29)	17:41	18:18	19:57	20:34
7	08:01	08:27 (29)	07:37	06:53	06:57	06:08
	17:01	28 08:55 (29)	17:42	18:19	19:58	20:35
8	08:01	08:28 (29)	07:36	07:52	06:55	06:07
	17:03	28 08:56 (29)	17:43	18:20	19:59	20:36
9	08:01	08:29 (29)	07:35	07:50	06:53	06:06
	17:04	27 08:56 (29)	17:45	19:21	20:00	20:37
10	08:01	08:29 (29)	07:33	07:48	06:51	06:04
	17:05	27 08:56 (29)	17:46	19:23	20:02	20:38
11	08:00	08:30 (29)	07:32	07:46	06:49	06:03
	17:06	26 08:56 (29)	17:48	19:24	20:03	20:40
12	08:00	08:30 (29)	07:31	07:44	08:05 (28)	06:48
	17:07	26 08:56 (29)	17:49	19:25	3 08:08 (28)	20:04
13	08:00	08:31 (29)	07:29	07:43	08:03 (28)	06:46
	17:08	25 08:56 (29)	17:50	19:27	6 08:09 (28)	20:05
14	07:59	08:32 (29)	07:28	07:41	08:01 (28)	06:44
	17:09	23 08:55 (29)	17:52	19:28	9 08:10 (28)	20:07
15	07:59	08:33 (29)	07:26	07:39	07:59 (28)	06:42
	17:11	23 08:56 (29)	17:53	19:29	11 08:10 (28)	20:08
16	07:58	08:34 (29)	07:25	07:37	07:57 (28)	06:41
	17:12	21 08:55 (29)	17:55	19:30	13 08:10 (28)	20:09
17	07:58	08:36 (29)	07:23	07:35	07:55 (28)	06:39
	17:13	19 08:55 (29)	17:56	19:32	15 08:10 (28)	20:10
18	07:57	08:37 (29)	07:22	07:33	07:54 (28)	06:37
	17:14	17 08:54 (29)	17:57	19:33	17 08:11 (28)	20:12
19	07:56	08:38 (29)	07:20	07:32	07:52 (28)	06:36
	17:16	15 08:53 (29)	17:59	19:34	18 08:10 (28)	20:13
20	07:56	08:40 (29)	07:19	07:30	07:50 (28)	06:34
	17:17	11 08:51 (29)	18:00	19:36	19 08:09 (28)	20:14
21	07:55	08:44 (29)	07:17	07:28	07:48 (28)	06:32
	17:18	5 08:49 (29)	18:00	19:37	20 08:08 (28)	20:15
22	07:54		07:15	07:26	07:48 (28)	06:31
	17:20		18:01	19:38	18 08:06 (28)	20:16
23	07:53		07:14	07:24	07:49 (28)	06:29
	17:21		18:03	19:39	16 08:05 (28)	20:18
24	07:52		07:12	07:22	07:51 (28)	06:27
	17:22		18:04	19:41	11 08:02 (28)	20:19
25	07:52		07:10	07:20		06:26
	17:24		18:06	19:42		20:20
26	07:51		07:09	07:19	06:24	05:48
	17:25		18:07	19:43	20:21	20:56
27	07:50		07:07	07:17	06:23	05:47
	17:27		18:08	19:44	20:23	20:57
28	07:49		07:05	07:15	06:21	05:46
	17:28		18:10	19:46	20:24	20:58
29	07:48			07:13	06:20	05:46
	17:29			19:47	20:25	20:59
30	07:47			07:11	06:18	05:45
	17:31			19:48	20:26	21:00
31	07:46			07:09		05:45
	17:32			19:49		21:01
Potential sun hours	287	292	369	403	458	464
Total, worst case	488		176		39	550
Sun reduction	0.57		0.59		0.65	0.70
Oper. time red.	0.98		0.98		0.98	0.98
Wind dir. red.	0.70		0.61		0.56	0.56
Total reduction	0.40		0.36		0.36	0.39
Total, real	193		63		14	215

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H288 - H288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December					
1	05:44	06:08 (19)	06:11	06:47	07:22	07:43 (28)	07:02	07:41	08:12 (29)		
	21:14	19 06:27 (19)	20:52	20:05	19:09	4 07:47 (28)	17:15	16:47	26 08:38 (29)		
2	05:44	06:09 (19)	06:12	06:48	07:23	07:44 (28)	07:03	07:42	08:12 (29)		
	21:14	18 06:27 (19)	20:51	20:03	19:07	1 07:45 (28)	17:14	16:47	27 08:39 (29)		
3	05:45	06:09 (19)	06:13	06:49	07:25		07:04	07:43	08:12 (29)		
	21:14	18 06:27 (19)	20:50	20:01	19:05		17:13	16:46	27 08:39 (29)		
4	05:46	06:10 (19)	06:14	06:50	07:26		07:06	07:44	08:12 (29)		
	21:13	17 06:27 (19)	20:49	19:59	19:03		17:11	16:46	28 08:40 (29)		
5	05:46	06:11 (19)	06:16	06:52	07:27		07:07	07:45	08:12 (29)		
	21:13	17 06:28 (19)	20:47	19:57	19:02		17:10	16:46	28 08:40 (29)		
6	05:47	06:11 (19)	06:17	06:53	07:28		07:08	07:46	08:13 (29)		
	21:13	16 06:27 (19)	20:46	19:56	19:00		17:09	16:46	28 08:41 (29)		
7	05:48	06:12 (19)	06:18	06:54	07:29		07:10	07:47	08:13 (29)		
	21:12	15 06:27 (19)	20:45	19:54	18:56		17:07	16:45	29 08:42 (29)		
8	05:48	06:13 (19)	06:19	06:55	07:31		07:11	07:48	08:14 (29)		
	21:12	15 06:28 (19)	20:43	19:52	18:54		17:06	16:45	28 08:42 (29)		
9	05:49	06:13 (19)	06:20	06:56	07:32		07:13	07:49	08:15 (29)		
	21:12	14 06:27 (19)	20:42	19:50	18:53		17:05	16:45	28 08:43 (29)		
10	05:50	06:14 (19)	06:21	06:57	07:33		07:14	07:50	08:16 (29)		
	21:11	13 06:27 (19)	20:41	19:48	18:51		17:04	16:45	27 08:43 (29)		
11	05:51	06:15 (19)	06:22	06:59	07:34		07:15	07:51	08:16 (29)		
	21:11	12 06:27 (19)	20:39	19:46	18:49		17:03	16:45	27 08:43 (29)		
12	05:51	06:16 (19)	06:24	07:00	07:36		07:17	07:52	08:17 (29)		
	21:10	11 06:27 (19)	20:38	19:45	18:47		17:01	16:45	27 08:44 (29)		
13	05:52	06:16 (19)	06:25	07:01	07:37		07:18	07:53	08:18 (29)		
	21:10	10 06:26 (19)	20:36	19:43	18:45		17:00	16:45	26 08:44 (29)		
14	05:53	06:17 (19)	06:26	07:02	07:38		07:19	07:53	08:19 (29)		
	21:09	8 06:25 (19)	20:35	19:41	18:44		16:59	16:46	26 08:45 (29)		
15	05:54	06:18 (19)	06:27	07:03	07:39		07:21	07:54	08:20 (29)		
	21:08	7 06:25 (19)	20:33	19:39	18:42		16:58	16:46	26 08:46 (29)		
16	05:55	06:19 (19)	06:28	07:04	07:41		07:22	07:55	08:20 (29)		
	21:08	5 06:24 (19)	20:32	19:37	18:40		16:57	16:46	25 08:45 (29)		
17	05:56	06:20 (19)	06:29	07:06	07:42		07:23	07:56	08:21 (29)		
	21:07	3 06:23 (19)	20:30	19:35	18:39		16:56	16:46	25 08:46 (29)		
18	05:57	06:21 (19)	06:31	07:07	07:43		07:25	07:56	08:22 (29)		
	21:06	1 06:22 (19)	20:28	19:33	18:37		16:55	16:47	25 08:47 (29)		
19	05:58		06:32	07:08	07:45		07:26	07:57	08:22 (29)		
	21:05		20:27	19:31	18:35		16:55	16:47	25 08:47 (29)		
20	05:59		06:33	07:09	07:46		07:27	07:58	08:23 (29)		
	21:05		20:25	19:30	18:34		16:54	16:47	25 08:48 (29)		
21	06:00		06:34	07:10	07:47		07:28	08:19 (29)	07:58	08:23 (29)	
	21:04		20:24	19:28	18:32		16:53	5 08:24 (29)	16:48	25 08:48 (29)	
22	06:01		06:35	07:11	07:32 (28)	07:48	07:30	08:16 (29)	07:59	08:24 (29)	
	21:03		20:22	19:26	20 07:52 (28)	18:30	16:52	11 08:27 (29)	16:48	25 08:49 (29)	
23	06:02		06:36	07:13	07:34 (28)	07:50	07:31	08:15 (29)	07:59	08:24 (29)	
	21:02		20:20	19:24	19 07:53 (28)	18:29	16:51	15 08:30 (29)	16:49	25 08:49 (29)	
24	06:03		06:38	07:14	07:35 (28)	07:51	07:32	08:14 (29)	08:00	08:25 (29)	
	21:01		20:19	19:22	18 07:53 (28)	18:27	16:51	17 08:31 (29)	16:49	25 08:50 (29)	
25	06:04		06:39	07:15	07:36 (28)	07:52	07:34	08:13 (29)	08:00	08:25 (29)	
	21:00		20:17	19:20	17 07:53 (28)	18:26	16:50	19 08:32 (29)	16:50	25 08:50 (29)	
26	06:05		06:40	07:16	07:37 (28)	07:54	07:35	08:13 (29)	08:00	08:25 (29)	
	20:59		20:15	19:18	16 07:53 (28)	18:24	16:50	21 08:34 (29)	16:51	25 08:50 (29)	
27	06:06		06:41	07:17	07:38 (28)	07:55	07:36	08:12 (29)	08:01	08:26 (29)	
	20:58		20:13	19:16	14 07:52 (28)	18:23	16:49	23 08:35 (29)	16:51	25 08:51 (29)	
28	06:07		06:42	07:19	07:40 (28)	07:56	07:37	08:12 (29)	08:01	08:26 (29)	
	20:57		20:12	19:15	12 07:52 (28)	18:21	16:48	24 08:36 (29)	16:52	25 08:51 (29)	
29	06:08		06:43	07:20	07:41 (28)	07:58	07:38	08:12 (29)	08:01	08:26 (29)	
	20:56		20:10	19:13	10 07:51 (28)	18:20	16:48	25 08:37 (29)	16:53	26 08:52 (29)	
30	06:09		06:45	07:21	07:42 (28)	07:59	07:40	08:12 (29)	08:01	08:26 (29)	
	20:55		20:08	19:11	7 07:49 (28)	18:18	16:47	26 08:38 (29)	16:54	26 08:52 (29)	
31	06:10		06:46			08:00			08:02		08:26 (29)
	20:54		20:06			18:17			16:55		26 08:52 (29)
Potential sun hours	471	435	377	341	289	276					
Total, worst case	219		175	5	186	811					
Sun reduction	0.76		0.69	0.63	0.50	0.49					
Oper. time red.	0.98		0.98	0.98	0.98	0.98					
Wind dir. red.	0.56		0.61	0.61	0.70	0.70					
Total reduction	0.42		0.42	0.38	0.35	0.34					
Total, real	93		73	2	65	276					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H289 - H289

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:44 17:33	16:44 (40) 17:07 (40)	07:04 18:11	07:07 19:50	06:17 20:27
2	08:02 16:56	07:43 17:35	16:44 (40) 17:09 (40)	07:02 18:12	07:06 19:52	39 20:04 (29)
3	08:02 16:57	07:42 17:36	16:44 (40) 17:11 (40)	07:00 18:14	07:04 19:53	43 20:05 (29)
4	08:02 16:58	07:41 17:38	16:45 (40) 17:11 (40)	06:58 18:15	07:02 19:54	46 20:06 (29)
5	08:02 16:59	07:40 17:39	16:45 (40) 17:10 (40)	06:57 18:16	07:00 19:55	49 20:08 (29)
6	08:01 17:00	07:38 17:40	16:46 (40) 17:10 (40)	06:55 18:17	06:58 19:57	49 20:10 (29)
7	08:01 17:01	07:37 17:42	16:47 (40) 17:10 (40)	06:53 18:19	06:57 19:58	48 20:11 (29)
8	08:01 17:02	07:36 17:43	16:47 (40) 17:09 (40)	06:51 18:20	06:55 19:59	48 20:12 (29)
9	08:01 17:04	07:35 17:45	16:48 (40) 17:08 (40)	06:50 19:21	06:53 20:00	43 20:13 (29)
10	08:01 17:05	07:33 17:46	16:50 (40) 17:08 (40)	06:48 19:23	06:51 20:02	33 20:14 (29)
11	08:00 17:06	07:32 17:48	16:52 (40) 17:05 (40)	06:46 19:24	06:49 20:03	27 20:15 (29)
12	08:00 17:07	07:30 17:49	16:55 (40) 17:03 (40)	06:44 19:25	06:48 20:04	22 20:15 (29)
13	07:59 17:08	07:29 17:50	17:03 (40)	06:42 19:27	06:46 20:05	24 20:17 (29)
14	07:59 17:09	07:28 17:52		06:41 19:28	06:44 20:06	24 20:17 (29)
15	07:59 17:11	07:26 17:53		06:40 20:08	06:42 20:44	23 20:17 (29)
16	07:58 17:12	07:25 17:54		06:39 20:09	06:41 20:45	23 20:16 (29)
17	07:57 17:13	07:23 17:56		06:39 20:10	06:59 (32) 20:46	21 20:16 (29)
18	07:57 17:14	07:22 17:57		06:37 20:11	06:58 (32) 20:47	20 20:15 (29)
19	07:56 17:16	07:20 17:59		06:36 20:13	06:56 (32) 20:48	18 20:14 (29)
20	07:55 17:17	07:18 18:00		06:34 19:35	06:54 (32) 20:50	16 20:13 (29)
21	07:55 17:18	07:17 18:00		06:32 19:37	06:53 (32) 20:51	14 20:13 (29)
22	07:54 17:20	16:50 (40) 07:15 16:53 (40)	18:01	06:31 19:38	06:51 (32) 20:52	11 20:12 (29)
23	07:53 17:21	16:48 (40) 07:14 16:55 (40)	18:03	06:29 19:39	06:50 (33) 20:53	6 20:09 (29)
24	07:52 17:22	16:47 (40) 07:12 16:56 (40)	18:04	06:27 19:40	06:48 (33) 20:54	
25	07:51 17:24	16:46 (40) 07:10 16:57 (40)	18:05	06:26 19:42	06:46 (33) 20:55	
26	07:51 17:25	16:46 (40) 07:09 16:59 (40)	18:07	06:24 19:43	06:45 (33) 20:56	
27	07:50 17:26	16:45 (40) 07:07 17:00 (40)	18:08	06:23 19:44	06:43 (33) 20:57	
28	07:49 17:28	16:45 (40) 07:05 17:02 (40)	18:10	06:21 19:45	06:42 (33) 20:58	
29	07:48 17:29	16:45 (40) 07:04 17:03 (40)		06:20 19:47	06:40 (33) 20:59	
30	07:47 17:31	16:45 (40) 07:03 17:05 (40)		06:18 19:48	06:39 (33) 21:00	
31	07:46 17:32	16:44 (40) 07:02 17:06 (40)		06:17 19:49	06:38 (33) 21:00	
Potential sun hours	287	292	369	403	458	464
Total, worst case	135	254		351	671	
Sun reduction	0.57	0.59		0.61	0.65	
Oper. time red.	0.98	0.98		0.98	0.98	
Wind dir. red.	0.56	0.56		0.54	0.60	
Total reduction	0.31	0.32		0.32	0.38	
Total, real	42	82		112	255	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H289 - H289

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	20:03 (29) 20:26 (29)	06:47 20:05	07:22 19:09	07:02 16:19 (40)
2	05:44 21:14	06:12 20:51	20:03 (29) 20:25 (29)	06:48 20:03	07:23 19:07	18 16:37 (40)
3	05:45 21:13	06:13 20:50	07:03 (32) 20:24 (29)	06:49 20:01	07:24 19:05	20 16:38 (40)
4	05:46 21:13	06:14 20:49	07:00 (32) 20:23 (29)	06:50 19:59	07:26 19:03	23 16:39 (40)
5	05:46 21:13	06:16 20:47	06:48 (33) 20:22 (29)	06:51 19:57	07:27 19:02	24 16:40 (40)
6	05:47 21:13	06:17 20:46	06:46 (33) 20:20 (29)	06:53 19:56	07:28 19:00	25 16:40 (40)
7	05:47 21:12	06:18 20:45	06:45 (33) 20:19 (29)	06:54 19:54	07:29 18:56	26 16:41 (40)
8	05:48 21:12	06:19 20:43	06:44 (33) 20:18 (29)	06:55 19:52	07:31 18:54	27 16:41 (40)
9	05:49 21:11	06:20 20:42	06:43 (33) 20:16 (29)	06:56 19:50	07:32 18:52	27 16:41 (40)
10	05:50 21:11	06:21 20:40	06:44 (33) 20:15 (29)	06:57 19:48	07:33 18:51	25 16:40 (40)
11	05:50 21:11	06:22 20:39	06:45 (33) 20:13 (29)	06:58 19:46	07:34 18:49	23 16:38 (40)
12	05:51 21:10	06:24 20:37	06:46 (33) 20:12 (29)	07:00 19:44	07:36 18:47	22 16:37 (40)
13	05:52 21:09	06:25 20:36	06:47 (33) 07:21 (32)	07:01 19:43	07:37 18:45	21 16:36 (40)
14	05:53 21:09	06:26 20:34	06:49 (33) 07:22 (32)	07:02 19:41	07:38 18:44	18 16:35 (40)
15	05:54 21:08	06:27 20:33	06:50 (33) 07:22 (32)	07:03 19:39	07:39 18:42	17 16:34 (40)
16	05:55 21:08	06:28 20:31	06:51 (33) 07:22 (32)	07:04 19:37	07:41 18:40	15 16:33 (40)
17	05:56 21:07	06:29 20:30	06:52 (33) 07:22 (32)	07:05 19:35	07:42 18:39	13 16:32 (40)
18	05:57 21:06	06:31 20:28	06:53 (33) 07:21 (32)	07:07 19:33	07:43 18:37	11 16:30 (40)
19	05:58 21:05	06:32 20:27	06:54 (33) 07:21 (32)	07:08 19:31	07:44 18:35	9 16:29 (40)
20	05:58 21:05	20:14 (29) 20:17 (29)	06:33 20:25	06:55 (33) 07:20 (32)	07:09 19:29	7 16:29 (40)
21	05:59 21:04	20:11 (29) 20:20 (29)	06:34 20:23	06:56 (32) 07:19 (32)	07:10 19:28	3 16:28 (40)
22	06:00 21:03	20:09 (29) 20:22 (29)	06:35 20:22	06:57 (32) 07:18 (32)	07:11 19:26	11 16:30 (40)
23	06:01 21:02	20:08 (29) 20:23 (29)	06:36 20:20	06:59 (32) 07:18 (32)	07:12 19:24	9 16:29 (40)
24	06:02 21:01	20:07 (29) 20:24 (29)	06:38 20:18	07:00 (32) 07:16 (32)	07:14 19:22	7 16:27 (40)
25	06:03 21:00	20:06 (29) 20:25 (29)	06:39 20:17	07:01 (32) 07:14 (32)	07:15 19:20	5 16:26 (40)
26	06:05 20:59	20:06 (29) 20:26 (29)	06:40 20:15	07:02 (32) 07:12 (32)	07:16 19:18	3 16:24 (40)
27	06:06 20:58	20:05 (29) 20:27 (29)	06:41 20:13	07:03 (32) 07:09 (32)	07:17 19:16	1 16:22 (40)
28	06:07 20:57	20:04 (29) 20:27 (29)	06:42 20:12	07:18 19:14	07:56 18:21	0 16:18 (40)
29	06:08 20:56	20:04 (29) 20:28 (29)	06:43 20:10	07:20 19:13	07:58 18:20	0 16:18 (40)
30	06:09 20:55	20:04 (29) 20:28 (29)	06:45 20:08	07:21 19:11	07:59 18:18	17:23 (40) 16:47
31	06:10 20:53	20:03 (29) 20:27 (29)	06:46 20:06	08:00 18:17	17:21 (40) 17:35 (40)	16:47 16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case	213	822		23	372	
Sun reduction	0.76	0.74		0.63	0.50	
Oper. time red.	0.98	0.98		0.98	0.98	
Wind dir. red.	0.64	0.56		0.56	0.56	
Total reduction	0.48	0.40		0.35	0.27	
Total, real	102	332		8	102	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H292 - H292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including sunrise/sunset times and reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H293 - H293

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01 16:55	07:44 17:33	07:04 18:11	07:07 19:50	18:53 (34) 19:00 (34)	06:16 20:27
2	08:02 16:56	07:43 17:35	07:02 18:12	19:50 19:52	19:00 (34) 20:27	20:27 21:01
3	08:02 16:57	07:42 17:36	07:00 18:13	19:50 19:53	19:00 (34) 20:27	20:27 21:02
4	08:02 16:58	07:41 17:37	06:58 18:15	19:50 19:54	19:00 (34) 20:27	20:27 21:04
5	08:01 16:59	07:40 17:39	06:57 18:16	19:50 19:55	19:00 (34) 20:27	20:27 21:04
6	08:01 17:00	07:38 17:40	06:55 18:17	19:50 19:56	19:00 (34) 20:27	20:27 21:05
7	08:01 17:01	07:37 17:42	06:53 18:19	19:50 19:58	19:00 (34) 20:27	20:27 21:06
8	08:01 17:02	07:36 17:43	06:51 18:20	19:50 19:59	19:00 (34) 20:27	20:27 21:07
9	08:01 17:03	07:34 17:45	06:50 19:21	19:50 20:00	19:00 (34) 20:27	20:27 21:07
10	08:00 17:05	07:33 17:46	07:48 19:23	19:50 20:01	19:00 (34) 20:27	20:27 21:08
11	08:00 17:06	07:32 17:47	07:46 19:24	19:50 20:03	19:00 (34) 20:27	20:27 21:09
12	08:00 17:07	07:30 17:49	07:44 19:25	19:50 20:04	19:00 (34) 20:27	20:27 21:09
13	07:59 17:08	07:29 17:50	07:42 19:26	19:50 20:05	19:00 (34) 20:27	20:27 21:10
14	07:59 17:09	07:27 17:52	07:40 19:28	19:50 20:06	19:00 (34) 20:27	20:27 21:10
15	07:58 17:10	07:26 17:53	07:39 19:29	19:50 20:08	19:00 (34) 20:27	20:27 21:11
16	07:58 17:12	07:25 17:54	07:37 19:30	19:50 20:09	19:00 (34) 20:27	20:27 21:11
17	07:57 17:13	07:23 17:56	07:35 19:32	19:50 20:10	19:00 (34) 20:27	20:27 21:12
18	07:57 17:14	07:21 17:57	07:33 19:33	19:50 20:11	19:00 (34) 20:27	20:27 21:12
19	07:56 17:16	07:20 17:58	07:31 19:34	19:50 20:13	19:00 (34) 20:27	20:27 21:12
20	07:55 17:17	07:18 18:00	07:29 19:35	19:50 20:14	19:00 (34) 20:27	20:27 21:13
21	07:55 17:18	07:17 18:00	07:28 19:37	19:50 20:15	19:00 (34) 20:27	20:27 21:13
22	07:54 17:20	07:15 18:01	07:26 19:38	19:50 20:16	19:00 (34) 20:27	20:27 21:13
23	07:53 17:21	07:14 18:03	07:24 19:39	19:50 20:17	19:00 (34) 20:27	20:27 21:13
24	07:52 17:22	07:12 18:04	07:22 19:40	19:50 20:19	19:00 (34) 20:27	20:27 21:13
25	07:51 17:24	07:10 18:05	07:20 19:42	19:50 20:20	19:00 (34) 20:27	20:27 21:14
26	07:50 17:25	07:09 18:07	07:18 19:43	19:50 20:21	19:00 (34) 20:27	20:27 21:14
27	07:50 17:26	07:07 18:08	07:16 19:44	19:50 20:22	19:00 (34) 20:27	20:27 21:14
28	07:49 17:28	07:05 18:09	07:15 19:45	19:50 20:24	19:00 (34) 20:27	20:27 21:14
29	07:48 17:29	07:04 18:09	07:13 19:47	19:50 20:25	19:00 (34) 20:27	20:27 21:14
30	07:46 17:30	07:03 18:09	07:11 19:48	19:50 20:26	19:00 (34) 20:27	20:27 21:14
31	07:45 17:32	07:02 18:09	07:09 19:49	19:50 20:26	19:00 (34) 20:27	20:27 21:14
Potential sun hours	287	292	369	403	458	464
Total, worst case	225	35	1427	7		
Sun reduction	0.57	0.59	0.59	0.61		
Oper. time red.	0.98	0.98	0.98	0.98		
Wind dir. red.	0.56	0.60	0.60	0.57		
Total reduction	0.31	0.35	0.35	0.34		
Total, real	70	12	498	2		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H293 - H293

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:44 (35)	07:01
	21:14	20:52	20:04	19:09	18:44 (34)	17:15
2	05:44	06:12	06:48	07:23	07:44 (35)	07:03
	21:13	20:51	20:03	19:07	08:29 (35)	17:14
3	05:45	06:13	06:49	07:24	07:45 (35)	07:04
	21:13	20:50	20:01	19:05	08:28 (35)	17:12
4	05:45	06:14	06:50	07:26	07:47 (35)	07:06
	21:13	20:48	19:59	19:03	08:28 (35)	17:11
5	05:46	06:15	06:51	07:27	07:48 (35)	07:07
	21:13	20:47	19:57	19:01	08:27 (35)	17:10
6	05:47	06:16	06:53	07:28	07:49 (35)	07:08
	21:13	20:46	19:55	19:00	08:26 (35)	17:08
7	05:47	06:18	06:54	07:29	07:50 (35)	07:10
	21:12	20:44	19:54	18:56	08:25 (35)	17:07
8	05:48	06:19	06:55	07:30	07:52 (35)	07:11
	21:12	20:43	19:52	18:54	08:25 (35)	17:06
9	05:49	06:20	06:56	07:32	07:53 (35)	07:12
	21:11	20:42	19:50	18:52	08:23 (35)	17:05
10	05:50	06:21	06:57	07:33	07:54 (35)	07:14
	21:11	20:40	19:48	18:51	08:21 (35)	17:04
11	05:50	06:22	06:58	18:47 (34)	07:34	07:15
	21:10	20:39	19:46	18:52 (34)	18:49	17:02
12	05:51	06:23	06:59	18:42 (34)	07:35	07:16
	21:10	20:37	19:44	18:56 (34)	18:47	17:01
13	05:52	06:25	07:01	18:39 (34)	07:37	07:18
	21:09	20:36	19:42	18:58 (34)	18:45	17:00
14	05:53	06:26	07:02	18:36 (34)	07:38	07:19
	21:09	20:34	19:41	18:59 (34)	18:44	16:59
15	05:54	06:27	07:03	18:34 (34)	07:39	07:20
	21:08	20:33	19:39	19:00 (34)	18:42	16:58
16	05:55	06:28	07:04	08:07 (35)	07:40	07:22
	21:07	20:31	19:37	19:00 (34)	18:40	16:57
17	05:55	06:29	07:05	08:02 (35)	07:42	07:23
	21:07	20:30	19:35	19:01 (34)	18:38	16:56
18	05:56	06:30	07:06	07:59 (35)	07:43	07:24
	21:06	20:28	19:33	19:02 (34)	18:37	16:55
19	05:57	06:32	07:08	07:57 (35)	07:44	07:26
	21:05	20:27	19:31	19:02 (34)	18:35	16:54
20	05:58	06:33	07:09	07:55 (35)	07:46	07:27
	21:04	20:25	19:29	19:01 (34)	18:33	16:54
21	05:59	06:34	07:10	07:53 (35)	07:47	07:28
	21:04	20:23	19:27	19:01 (34)	18:32	16:53
22	06:00	06:35	07:11	07:51 (35)	07:48	07:30
	21:03	20:22	19:26	19:00 (34)	18:30	16:52
23	06:01	06:36	07:12	07:49 (35)	07:49	07:31
	21:02	20:20	19:24	18:58 (34)	18:29	16:51
24	06:02	06:37	07:14	07:49 (35)	07:51	07:32
	21:01	20:18	19:22	18:57 (34)	18:27	16:51
25	06:03	06:39	07:15	07:48 (35)	07:52	07:33
	21:00	20:17	19:20	18:55 (34)	18:25	16:50
26	06:04	06:40	07:16	07:47 (35)	07:53	07:35
	20:59	20:15	19:18	18:53 (34)	18:24	16:49
27	06:05	06:41	07:17	07:46 (35)	07:55	07:36
	20:58	20:13	19:16	18:51 (34)	18:22	16:49
28	06:07	06:42	07:18	07:45 (35)	07:56	07:37
	20:57	20:11	19:14	18:49 (34)	18:21	16:48
29	06:08	06:43	07:19	07:44 (35)	07:57	07:38
	20:56	20:10	19:12	18:47 (34)	18:19	16:48
30	06:09	06:44	07:21	07:45 (35)	07:59	07:39
	20:55	20:08	19:11	18:46 (34)	18:18	16:47
31	06:10	06:46		08:00		08:01
	20:53	20:06		18:16		16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case			1006	466	239	
Sun reduction			0.69	0.63	0.50	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.60	0.62	0.56	
Total reduction			0.40	0.38	0.27	
Total, real			406	178	66	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H294 - H294

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47		
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:46		
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:13 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46		
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46		
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46		
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:47 21:12	06:16 20:46	06:52 19:55	07:28 18:58	07:08 17:08	07:46 16:45		
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:18 20:44	06:54 19:53	07:29 18:56	07:09 17:07	07:47 16:45		
8	08:01 17:02	07:36 17:43	06:51 18:20	06:54 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45		
9	08:01 17:03	07:34 17:44	06:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45		
10	08:00 17:04	07:33 17:46	06:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:49 21:11	06:21 20:40	06:57 19:48	07:33 18:50	07:14 17:03	07:50 16:45		
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45		
12	08:00 17:07	07:30 17:49	06:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45		
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:00 20:42	05:40 21:10	05:52 21:09	06:24 20:36	19:49 (35) 19:57 (35)	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:45	
14	07:59 17:09	07:27 17:51	06:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	8 13	19:46 (35) 19:59 (35)	07:02 19:41	07:38 18:43	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	06:39 19:29	06:42 20:08	19:40 (35) 19:45 (35)	05:58 20:44	05:39 21:11	06:27 20:33	16 16	19:44 (35) 20:00 (35)	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	06:37 19:30	06:40 20:09	19:39 (35) 19:47 (35)	05:57 20:45	05:39 21:11	06:28 21:07	18 18	19:44 (35) 20:02 (35)	07:04 19:37	07:40 18:40	07:22 16:46	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:31	06:39 20:10	19:38 (35) 19:48 (35)	05:56 20:46	05:39 21:11	06:29 21:07	21 21	19:42 (35) 20:03 (35)	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	19:36 (35) 19:48 (35)	05:55 20:47	05:40 21:12	06:30 21:06	22 22	19:41 (35) 20:03 (35)	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	06:31 19:34	06:35 20:12	19:36 (35) 19:50 (35)	05:54 20:48	05:40 21:12	06:31 21:05	20 20	19:41 (35) 20:01 (35)	07:08 19:31	07:44 18:35	07:26 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	19:35 (35) 19:51 (35)	05:53 20:49	05:40 21:13	06:33 21:04	20 20	19:40 (35) 20:00 (35)	07:09 19:29	07:45 18:33	07:27 16:53	07:57 16:47
21	07:55 17:18	07:17 18:00	06:27 19:36	06:32 20:15	19:34 (35) 19:52 (35)	05:52 20:50	05:40 21:13	06:34 21:03	19 19	19:39 (35) 19:58 (35)	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:19	07:15 18:01	06:26 19:38	06:30 20:16	19:35 (35) 19:54 (35)	05:51 20:51	05:40 21:13	06:35 21:03	17 17	19:39 (35) 19:56 (35)	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:03	06:24 19:39	06:29 20:17	19:34 (35) 19:54 (35)	05:50 20:53	05:40 21:13	06:36 21:02	16 16	19:39 (35) 19:55 (35)	07:12 19:24	07:49 18:28	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	19:35 (35) 19:56 (35)	05:49 20:54	05:41 21:13	06:37 21:01	14 14	19:39 (35) 19:53 (35)	07:13 19:22	07:51 18:27	07:32 16:50	07:59 16:49
25	07:51 17:23	07:10 18:05	06:20 19:41	06:26 20:20	19:35 (35) 19:56 (35)	05:48 20:55	05:41 21:14	06:38 21:00	12 12	19:40 (35) 19:52 (35)	07:15 19:20	07:52 18:25	07:33 16:50	08:00 16:50
26	07:50 17:25	07:09 18:07	06:18 19:43	06:24 20:21	19:36 (35) 19:56 (35)	05:48 20:56	05:41 21:14	06:40 20:59	9 9	19:41 (35) 19:50 (35)	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:50
27	07:49 17:26	07:07 18:08	06:16 19:44	06:22 20:22	19:36 (35) 19:54 (35)	05:47 20:57	05:42 21:14	06:41 20:58	7 7	19:41 (35) 19:48 (35)	07:17 19:16	07:55 18:22	07:36 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	06:15 19:45	06:21 20:24	19:38 (35) 19:53 (35)	05:46 20:57	05:42 21:14	06:42 20:57	4 4	19:43 (35) 19:47 (35)	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:46	06:13 20:25	06:19 20:25	19:39 (35) 19:51 (35)	05:45 20:58	05:43 21:14	06:43 20:56	3 3	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:53	
30	07:46 17:30	07:03 19:48	06:11 20:26	06:18 20:26	19:42 (35) 19:48 (35)	05:45 20:59	05:43 21:14	06:44 20:54	2 2	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:53	
31	07:45 17:32	07:02 19:49	06:09 19:49	06:19 21:00	05:44 21:00	06:10 20:53	06:45 20:06	06:45 20:06	1 1	08:00 18:16	08:01 16:47	08:01 16:54		
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276		
Total, worst case				235										
Sun reduction				0.61										
Oper. time red.				0.98										
Wind dir. red.				0.62										
Total reduction				0.37										
Total, real				87				106						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H295 - H295

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:09	07:47
	17:01	17:42	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H296 - H296

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:09	07:47
	17:01	17:42	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
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29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H297 - H297

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December						
1	08:02	16:03 (22)	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:41	15:50 (22)				
	16:55	24	16:27 (22)	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	26	16:16 (22)			
2	08:02	16:03 (22)	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	15:50 (22)				
	16:56	25	16:28 (22)	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	27	16:17 (22)			
3	08:02	16:04 (22)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43	15:50 (22)				
	16:57	25	16:29 (22)	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	27	16:17 (22)			
4	08:02	16:04 (22)	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44	15:50 (22)				
	16:58	26	16:30 (22)	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	27	16:17 (22)			
5	08:01	16:05 (22)	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45	15:50 (22)				
	16:59	26	16:31 (22)	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	28	16:18 (22)			
6	08:01	16:05 (22)	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46	15:51 (22)				
	17:00	27	16:32 (22)	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	19:00	17:08	27	16:18 (22)			
7	08:01	16:05 (22)	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47	15:51 (22)				
	17:01	28	16:33 (22)	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	26	16:17 (22)			
8	08:01	16:06 (22)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48	15:51 (22)				
	17:02	27	16:33 (22)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	26	16:17 (22)			
9	08:01	16:07 (22)	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49	15:52 (22)				
	17:03	27	16:34 (22)	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	25	16:17 (22)			
10	08:01	16:07 (22)	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50	15:52 (22)				
	17:04	27	16:34 (22)	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	25	16:17 (22)			
11	08:00	16:08 (22)	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51	15:53 (22)				
	17:06	26	16:34 (22)	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	24	16:17 (22)			
12	08:00	16:08 (22)	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52	15:54 (22)				
	17:07	26	16:34 (22)	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	23	16:17 (22)			
13	07:59	16:09 (22)	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52	15:54 (22)				
	17:08	26	16:35 (22)	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	24	16:18 (22)			
14	07:59	16:09 (22)	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53	15:55 (22)				
	17:09	25	16:34 (22)	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	23	16:18 (22)			
15	07:58	16:10 (22)	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54	15:55 (22)				
	17:10	25	16:35 (22)	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	22	16:17 (22)			
16	07:58	16:11 (22)	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55	15:56 (22)				
	17:12	23	16:34 (22)	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	22	16:18 (22)			
17	07:57	16:11 (22)	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55	15:56 (22)				
	17:13	23	16:34 (22)	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	22	16:18 (22)			
18	07:57	16:13 (22)	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56	15:57 (22)				
	17:14	21	16:34 (22)	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	22	16:19 (22)			
19	07:56	16:14 (22)	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57	15:57 (22)				
	17:15	20	16:34 (22)	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	7	15:56 (22)			
20	07:55	16:15 (22)	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	15:53 (22)	16:47	22	16:19 (22)		
	17:17	18	16:33 (22)	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	12	16:05 (22)	16:47	21	16:19 (22)
21	07:55	16:16 (22)	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58	15:58 (22)				
	17:18	16	16:32 (22)	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16	16:08 (22)	16:48	21	16:19 (22)
22	07:54	16:19 (22)	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58	15:59 (22)				
	17:19	12	16:31 (22)	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	18	16:09 (22)	16:48	21	16:20 (22)
23	07:53	16:22 (22)	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59	15:59 (22)				
	17:21	7	16:29 (22)	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	20	16:11 (22)	16:49	21	16:20 (22)
24	07:52	16:23 (22)	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59	16:00 (22)				
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	21:08	20:18	19:22	18:27	16:50	21	16:11 (22)	16:49	21	16:21 (22)	
25	07:51	16:24 (22)	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	07:59	16:00 (22)				
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	21:07	20:17	19:20	18:25	16:50	23	16:12 (22)	16:50	22	16:22 (22)	
26	07:50	16:25 (22)	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	07:59	16:00 (22)				
	17:25	18:07	19:43	20:21	20:56	21:14	21:00	20:59	20:15	19:18	18:24	16:49	23	16:13 (22)	16:50	22	16:22 (22)	
27	07:50	16:26 (22)	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	07:59	16:00 (22)				
	17:26	18:08	19:44	20:22	20:57	21:14	21:00	20:58	20:13	19:16	18:22	16:49	25	16:14 (22)	16:51	22	16:22 (22)	
28	07:49	16:27 (22)	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	07:59	16:02 (22)				
	17:28	18:09	19:45	20:24	20:58	21:14	21:00	20:57	20:11	19:14	18:21	16:48	25	16:14 (22)	16:52	22	16:24 (22)	
29	07:48	16:28 (22)	07:03	07:13	06:19	05:45	05:43	06:08	06:43	07:19	07:57	07:38	07:59	16:02 (22)				
	17:29	18:11	19:47	20:25	20:59	21:14	21:00	20:56	20:10	19:12	18:19	16:48	26	16:15 (22)	16:53	23	16:25 (22)	
30	07:47	16:29 (22)	07:01	07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	07:59	16:02 (22)				
	17:30	18:12	19:48	20:26	20:59	21:14	21:00	20:55	20:08	19:11	18:18	16:47	26	16:16 (22)	16:53	23	16:25 (22)	
31	07:45	16:30 (22)	07:00	07:09	06:15	05:42	05:40	06:10	06:45	07:22	08:00	07:40	08:01	16:02 (22)				
	17:32	18:14	19:49	20:27	21:00	21:15	21:00	20:53	20:06	19:09	18:16	16:46	24	16:54	16:26 (22)			
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	731					
Total, worst case	530										242		731					
Sun reduction	0.57										0.50		0.49					
Oper. time red.	0.98										0.98		0.98					
Wind dir. red.	0.56										0.56		0.56					
Total reduction	0.31										0.27		0.27					
Total, real	165										66		195					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H299 - H299

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the year, including sunrise/set times and reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout with columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time).

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H300 - H300

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June								
1	08:02	16:26 (30)	07:44	16:27 (30)	07:04	07:29 (34)	07:07	06:17	05:44	06:07 (22)				
	16:55	1	16:27 (30)	17:33	26	16:53 (30)	18:11	30	07:59 (34)	19:50	20:27	21:01	16	06:23 (22)
2	08:02	16:25 (30)	07:43	16:28 (30)	07:02	16:28 (30)	07:02	07:29 (34)	07:06	06:15	05:43	06:07 (22)		
	16:56	3	16:28 (30)	17:35	24	16:52 (30)	18:12	29	07:58 (34)	19:52	20:29	21:02	16	06:23 (22)
3	08:02	16:24 (30)	07:42	16:30 (30)	07:00	16:30 (30)	07:00	07:30 (34)	07:04	06:14	05:43	06:06 (22)		
	16:57	5	16:29 (30)	17:36	22	16:52 (30)	18:13	27	07:57 (34)	19:53	20:30	21:03	16	06:22 (22)
4	08:02	16:24 (30)	07:41	16:32 (30)	06:58	16:32 (30)	06:58	07:31 (34)	07:02	06:12	05:42	06:06 (22)		
	16:58	6	16:30 (30)	17:38	18	16:50 (30)	18:15	25	07:56 (34)	19:54	20:31	21:04	18	20:38 (20)
5	08:02	16:24 (30)	07:40	16:33 (30)	06:57	16:33 (30)	06:57	07:32 (34)	07:00	06:11	05:42	06:05 (22)		
	16:59	7	16:31 (30)	17:39	15	16:48 (30)	18:16	22	07:54 (34)	19:55	20:32	21:05	19	20:38 (20)
6	08:01	16:23 (30)	07:38	16:37 (30)	06:55	16:37 (30)	06:55	07:33 (34)	06:58	06:09	05:41	06:05 (22)		
	17:00	9	16:32 (30)	17:40	8	16:45 (30)	18:17	19	07:52 (34)	19:57	20:33	21:05	20	20:39 (20)
7	08:01	16:22 (30)	07:37	16:41 (30)	06:53	16:41 (30)	06:53	07:37 (34)	06:56	06:08	05:41	06:05 (22)		
	17:01	11	16:33 (30)	17:42	18:19	18:19	18:19	12	07:49 (34)	19:58	20:35	21:06	22	20:40 (20)
8	08:01	16:22 (30)	07:36	16:44 (30)	06:51	16:44 (30)	06:51	07:40 (34)	06:59	06:07	05:41	06:04 (22)		
	17:02	12	16:34 (30)	17:43	18:20	18:20	18:20	10	07:47 (34)	19:59	20:36	21:07	23	20:40 (20)
9	08:01	16:23 (30)	07:35	16:46 (30)	06:50	16:46 (30)	06:50	07:43 (34)	06:57	06:06	05:40	06:04 (22)		
	17:04	13	16:36 (30)	17:45	19:21	19:21	19:21	8	07:41 (34)	19:59	20:37	21:07	24	20:41 (20)
10	08:01	16:22 (30)	07:33	16:48 (30)	06:48	16:48 (30)	06:48	07:44 (34)	06:55	06:04	05:40	06:04 (22)		
	17:05	15	16:37 (30)	17:46	19:23	19:23	19:23	6	07:39 (34)	19:59	20:38	21:08	24	20:41 (20)
11	08:00	16:22 (30)	07:32	16:50 (30)	06:46	16:50 (30)	06:46	07:45 (34)	06:53	06:03	05:40	06:05 (22)		
	17:06	16	16:38 (30)	17:47	19:24	19:24	19:24	4	07:38 (34)	19:59	20:39	21:09	24	20:42 (20)
12	08:00	16:21 (30)	07:30	16:52 (30)	06:44	16:52 (30)	06:44	07:46 (34)	06:51	06:02	05:40	06:05 (22)		
	17:07	18	16:39 (30)	17:49	19:25	19:25	19:25	2	07:37 (34)	19:59	20:41	21:09	24	20:43 (20)
13	07:59	16:22 (30)	07:29	16:54 (30)	06:42	16:54 (30)	06:42	07:47 (34)	06:46	06:01	05:40	06:06 (22)		
	17:08	19	16:41 (30)	17:50	19:27	19:27	19:27	0	07:36 (34)	19:59	20:42	21:10	23	20:43 (20)
14	07:59	16:21 (30)	07:28	16:56 (30)	06:41	16:56 (30)	06:41	07:48 (34)	06:44	05:59	05:40	06:06 (22)		
	17:09	20	16:41 (30)	17:52	19:28	19:28	19:28	0	07:35 (34)	19:59	20:43	21:10	24	20:44 (20)
15	07:59	16:22 (30)	07:26	16:58 (30)	06:39	16:58 (30)	06:39	07:49 (34)	06:42	05:58	05:40	06:07 (22)		
	17:11	21	16:43 (30)	17:53	4	07:51 (34)	19:29	0	07:34 (34)	19:59	20:44	21:11	23	20:44 (20)
16	07:58	16:21 (30)	07:25	16:59 (30)	06:37	16:59 (30)	06:37	07:50 (34)	06:41	05:57	05:40	06:07 (22)		
	17:12	23	16:44 (30)	17:54	8	07:54 (34)	19:30	0	07:33 (34)	19:59	20:45	21:11	24	20:45 (20)
17	07:57	16:21 (30)	07:23	17:00 (30)	06:35	17:00 (30)	06:35	07:51 (34)	06:39	05:56	05:40	06:07 (22)		
	17:13	24	16:45 (30)	17:56	12	07:56 (34)	19:32	0	07:32 (34)	19:59	20:46	21:12	24	20:45 (20)
18	07:57	16:21 (30)	07:22	17:01 (30)	06:33	17:01 (30)	06:33	07:52 (34)	06:37	05:55	05:40	06:08 (22)		
	17:14	26	16:47 (30)	17:57	15	07:58 (34)	19:33	0	07:31 (34)	19:59	20:47	21:12	23	20:45 (20)
19	07:56	16:21 (30)	07:20	17:02 (30)	06:31	17:02 (30)	06:31	07:53 (34)	06:36	05:54	05:40	06:08 (22)		
	17:16	27	16:48 (30)	17:59	17	07:58 (34)	19:34	0	07:30 (34)	19:59	20:48	21:12	23	20:45 (20)
20	07:55	16:21 (30)	07:18	17:03 (30)	06:30	17:03 (30)	06:30	07:54 (34)	06:34	05:53	05:40	06:08 (22)		
	17:17	29	16:50 (30)	18:00	20	07:59 (34)	19:35	0	07:29 (34)	19:59	20:49	21:13	23	20:45 (20)
21	07:55	16:21 (30)	07:17	17:04 (30)	06:28	17:04 (30)	06:28	07:55 (34)	06:32	05:52	05:40	06:08 (22)		
	17:18	30	16:51 (30)	18:00	22	08:00 (34)	19:37	0	07:28 (34)	19:59	20:51	21:13	23	20:45 (20)
22	07:54	16:22 (30)	07:15	17:05 (30)	06:26	17:05 (30)	06:26	07:56 (34)	06:31	05:51	05:40	06:09 (22)		
	17:20	31	16:53 (30)	18:01	24	08:00 (34)	19:38	0	07:27 (34)	19:59	20:52	21:13	23	20:46 (20)
23	07:53	16:22 (30)	07:14	17:06 (30)	06:24	17:06 (30)	06:24	07:57 (34)	06:29	05:50	05:40	06:09 (22)		
	17:21	32	16:54 (30)	18:03	26	08:00 (34)	19:39	0	07:26 (34)	19:59	20:53	21:13	23	20:46 (20)
24	07:52	16:22 (30)	07:12	17:07 (30)	06:22	17:07 (30)	06:22	07:58 (34)	06:27	05:49	05:40	06:09 (22)		
	17:22	33	16:55 (30)	18:04	28	08:01 (34)	19:40	0	07:25 (34)	19:59	20:54	21:14	23	20:46 (20)
25	07:51	16:23 (30)	07:10	17:08 (30)	06:20	17:08 (30)	06:20	07:59 (34)	06:26	05:49	05:40	06:09 (22)		
	17:24	32	16:55 (30)	18:05	30	08:01 (34)	19:42	0	07:24 (34)	19:59	20:55	21:14	23	20:46 (20)
26	07:51	16:23 (30)	07:09	17:09 (30)	06:18	17:09 (30)	06:18	08:02 (34)	06:24	05:48	05:40	06:09 (22)		
	17:25	32	16:55 (30)	18:07	31	08:00 (34)	19:43	0	07:23 (34)	19:59	20:56	21:14	24	20:47 (20)
27	07:50	16:24 (30)	07:07	17:10 (30)	06:17	17:10 (30)	06:17	08:03 (34)	06:23	05:47	05:40	06:09 (22)		
	17:26	31	16:55 (30)	18:08	32	08:01 (34)	19:44	0	07:22 (34)	19:59	20:57	21:14	23	20:46 (20)
28	07:49	16:24 (30)	07:05	17:11 (30)	06:15	17:11 (30)	06:15	08:04 (34)	06:21	05:46	05:40	06:09 (22)		
	17:28	31	16:55 (30)	18:09	31	08:00 (34)	19:45	0	07:21 (34)	19:59	20:58	21:14	23	20:47 (20)
29	07:48	16:25 (30)	07:04	17:12 (30)	06:13	17:12 (30)	06:13	08:05 (34)	06:20	05:46	05:40	06:09 (22)		
	17:29	30	16:55 (30)	18:10	30	08:00 (34)	19:46	0	07:20 (34)	19:59	20:59	21:14	23	20:46 (20)
30	07:47	16:26 (30)	07:03	17:13 (30)	06:11	17:13 (30)	06:11	08:06 (34)	06:18	05:45	05:40	06:08 (22)		
	17:31	29	16:55 (30)	18:11	29	08:00 (34)	19:47	0	07:19 (34)	19:59	21:00	21:14	23	20:47 (20)
31	07:46	16:26 (30)	07:02	17:14 (30)	06:09	17:14 (30)	06:09	08:07 (34)	06:17	05:44	05:40	06:08 (22)		
	17:32	27	16:53 (30)	18:12	27	08:00 (34)	19:49	0	07:18 (34)	19:59	21:00	21:14	23	20:47 (20)
Potential sun hours	287	292	369	403	458	464								
Total, worst case	643	413	164	133	664									
Sun reduction	0.57	0.59	0.59	0.65	0.70									
Oper. time red.	0.98	0.98	0.98	0.98	0.98									
Wind dir. red.	0.56	0.61	0.63	0.56	0.60									
Total reduction	0.31	0.35	0.36	0.36	0.41									
Total, real	201	146	60	47	271									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)	

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H300 - H300

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:09 (22)	06:11	06:47	07:22	07:02
	21:14	24 20:46 (20)	20:52	20:05	19:09	17:15
2	05:44	06:09 (22)	06:12	06:48	07:23	07:03
	21:14	25 20:47 (20)	20:51	20:03	19:07	17:14
3	05:45	06:09 (22)	06:13	06:49	07:24	07:04
	21:13	24 20:46 (20)	20:50	20:01	19:05	17:12
4	05:45	06:10 (22)	06:14	06:50	07:26	07:06
	21:13	23 20:46 (20)	20:49	19:59	19:03	17:11
5	05:46	06:10 (22)	06:15	06:51	07:27	07:07
	21:13	22 20:45 (20)	20:47	19:57	19:01	17:10
6	05:47	06:11 (22)	06:17	06:53	07:28	07:08
	21:13	20 20:45 (20)	20:46	19:55	19:00	17:08
7	05:47	06:12 (22)	06:18	06:54	07:29	07:10
	21:12	19 20:45 (20)	20:45	19:54	18:56	17:07
8	05:48	06:12 (22)	06:19	06:55	07:31	07:11
	21:12	18 20:44 (20)	20:43	19:52	18:54	17:06
9	05:49	06:13 (22)	06:20	06:56	07:32	07:12
	21:12	17 06:30 (22)	20:42	19:50	18:52	17:05
10	05:50	06:14 (22)	06:21	06:57	07:33	07:14
	21:11	16 06:30 (22)	20:40	19:48	18:51	17:04
11	05:50	06:15 (22)	06:22	06:58	07:34	07:15
	21:11	16 06:31 (22)	20:39	19:46	18:49	17:02
12	05:51	06:15 (22)	06:23	07:00	07:35	07:16
	21:10	15 06:30 (22)	20:37	19:44	18:47	17:01
13	05:52	06:16 (22)	06:25	07:01	07:37	07:18
	21:09	15 06:31 (22)	20:36	19:43	18:45	17:00
14	05:53	06:17 (22)	06:26	07:02	07:38	07:19
	21:09	14 06:31 (22)	20:34	19:41	18:44	16:59
15	05:54	06:18 (22)	06:27	07:03	07:39	07:20
	21:08	14 06:32 (22)	20:33	19:39	18:42	16:58
16	05:55	06:19 (22)	06:28	07:04	07:41	07:22
	21:08	13 06:32 (22)	20:31	19:37	18:40	16:57
17	05:56	06:20 (22)	06:29	07:05	07:42	07:23
	21:07	12 06:32 (22)	20:30	19:35	18:38	16:56
18	05:56	06:20 (22)	06:30	07:07	07:43	07:24
	21:06	11 06:31 (22)	20:28	19:33	18:37	16:55
19	05:57	06:21 (22)	06:32	07:08	07:44	07:26
	21:05	10 06:31 (22)	20:27	19:31	18:35	16:54
20	05:58	06:22 (22)	06:33	07:09	07:46	07:27
	21:05	9 06:31 (22)	20:25	19:29	18:33	16:54
21	05:59	06:23 (22)	06:34	07:10	07:47	07:28
	21:04	8 06:31 (22)	20:23	19:28	18:32	16:53
22	06:00	06:24 (22)	06:35	07:11	07:48	07:30
	21:03	7 06:31 (22)	20:22	19:26	18:30	16:52
23	06:01	06:25 (22)	06:36	07:12	07:50	07:31
	21:02	5 06:30 (22)	20:20	19:24	18:29	16:51
24	06:02	06:26 (22)	06:37	07:14	07:51	07:32
	21:01	4 06:30 (22)	20:18	19:22	18:27	16:51
25	06:03	06:27 (22)	06:39	07:15	07:52	07:33
	21:00	2 06:29 (22)	20:17	19:20	18:26	16:50
26	06:04		06:40	07:16	07:54	07:35
	20:59		20:15	19:18	18:24	16:49
27	06:06		06:41	07:17	07:55	07:36
	20:58		20:13	19:16	18:22	16:49
28	06:07		06:42	07:18	07:56	07:37
	20:57		20:12	19:14	18:21	16:48
29	06:08		06:43	07:20	07:58	07:38
	20:56		20:10	19:13	18:19	16:48
30	06:09		06:44	07:21	07:59	07:39
	20:55		20:08	19:11	18:18	16:47
31	06:10		06:46		08:00	08:01
	20:53		20:06		18:17	16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case	363			473	660	101
Sun reduction	0.76			0.63	0.50	0.49
Oper. time red.	0.98			0.98	0.98	0.98
Wind dir. red.	0.57			0.63	0.56	0.56
Total reduction	0.42			0.39	0.27	0.27
Total, real	154			184	181	27

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H301 - H301

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	08:36 (21)	07:44	07:04	07:07	06:17
	16:55	32 09:08 (21)	17:33	18:11	19:50	20:27
2	08:02	08:37 (21)	07:43	07:02	07:06	06:15
	16:56	32 09:09 (21)	17:35	18:12	19:52	20:29
3	08:02	08:37 (21)	07:42	07:00	07:04	06:14
	16:57	32 09:09 (21)	17:36	18:13	19:53	20:30
4	08:02	08:38 (21)	07:41	06:58	07:02	06:12
	16:58	31 09:09 (21)	17:38	18:15	19:54	20:31
5	08:02	08:39 (21)	07:40	06:57	07:00	06:11
	16:59	31 09:10 (21)	17:39	18:16	19:55	20:32
6	08:02	08:40 (21)	07:39	06:55	17:54 (18)	06:58
	17:00	30 09:10 (21)	17:40	18:17	2 17:56 (18)	19:57
7	08:01	08:40 (21)	07:37	06:53	17:53 (18)	06:56
	17:01	29 09:09 (21)	17:42	18:19	5 17:58 (18)	19:58
8	08:01	08:41 (21)	07:36	07:51	18:52 (18)	06:55
	17:02	29 09:10 (21)	17:43	18:20	7 18:59 (18)	19:59
9	08:01	08:42 (21)	07:35	07:50	18:50 (18)	06:53
	17:04	28 09:10 (21)	17:45	19:21	10 19:00 (18)	20:00
10	08:01	08:42 (21)	07:33	07:48	18:50 (18)	06:51
	17:05	27 09:09 (21)	17:46	19:23	11 19:01 (18)	20:02
11	08:00	08:44 (21)	07:32	07:46	18:49 (18)	06:49
	17:06	25 09:09 (21)	17:47	19:24	13 19:02 (18)	20:03
12	08:00	08:44 (21)	07:30	07:44	18:50 (18)	06:48
	17:07	25 09:09 (21)	17:49	19:25	14 19:04 (18)	20:04
13	08:00	08:46 (21)	07:29	07:42	18:50 (18)	06:46
	17:08	23 09:09 (21)	17:50	19:27	16 19:06 (18)	20:05
14	07:59	08:47 (21)	07:28	07:41	18:50 (18)	06:44
	17:09	21 09:08 (21)	17:52	19:28	17 19:07 (18)	20:07
15	07:59	08:49 (21)	07:26	07:39	18:51 (18)	06:42
	17:11	18 09:07 (21)	17:53	19:29	15 19:06 (18)	20:08
16	07:58	08:50 (21)	07:25	07:37	18:53 (18)	06:41
	17:12	16 09:06 (21)	17:54	19:30	11 19:04 (18)	20:09
17	07:57	08:53 (21)	07:23	07:35	18:57 (18)	06:39
	17:13	12 09:05 (21)	17:56	19:32	2 18:59 (18)	20:10
18	07:57	08:55 (21)	07:22	07:33	06:37	5 07:04 (15)
	17:14	8 09:03 (21)	17:57	19:33	20:11	8 07:06 (15)
19	07:56		07:20	07:31	06:36	06:58 (15)
	17:16		17:59	19:34	20:13	10 07:06 (15)
20	07:56		07:19	07:30	06:34	06:54 (15)
	17:17		18:00	19:35	20:14	11 07:05 (15)
21	07:55		07:17	07:28	06:32	06:53 (15)
	17:18		18:00	19:37	20:15	13 07:06 (15)
22	07:54		07:15	07:26	06:31	06:51 (15)
	17:20		18:01	19:38	20:16	14 07:05 (15)
23	07:53		07:14	07:24	06:29	06:49 (15)
	17:21		18:03	19:39	20:18	16 07:05 (15)
24	07:52		07:12	07:22	06:27	06:48 (15)
	17:22		18:04	19:40	20:19	17 07:05 (15)
25	07:52		07:10	07:20	06:26	06:46 (15)
	17:24		18:05	19:42	20:20	18 07:04 (15)
26	07:51		07:09	07:18	06:24	06:45 (15)
	17:25		18:07	19:43	20:21	18 07:03 (15)
27	07:50		07:07	07:17	06:23	06:44 (15)
	17:26		18:08	19:44	20:23	18 07:02 (15)
28	07:49		07:05	07:15	06:21	06:45 (15)
	17:28		18:09	19:45	20:24	16 07:01 (15)
29	07:48			07:13	06:20	06:46 (15)
	17:29			19:47	20:25	13 06:59 (15)
30	07:47			07:11	06:18	06:49 (15)
	17:31			19:48	20:26	7 06:56 (15)
31	07:46			07:09		05:44
	17:32			19:49		21:01
Potential sun hours	287	292	369	403	458	464
Total, worst case	449		123	187		
Sun reduction	0.57		0.59	0.61		
Oper. time red.	0.98		0.98	0.98		
Wind dir. red.	0.70		0.56	0.53		
Total reduction	0.40		0.32	0.32		
Total, real	178		40	60		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H301 - H301

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	18:29 (18) 18:44 (18)	07:02 17:15
2	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	18:28 (18) 18:42 (18)	07:03 17:14
3	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	18:27 (18) 18:40 (18)	07:04 17:12
4	05:45 21:13	06:14 20:49	06:50 19:59	07:26 19:03	18:28 (18) 18:38 (18)	07:06 17:11
5	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	18:28 (18) 18:36 (18)	07:07 17:10
6	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	18:28 (18) 18:34 (18)	07:08 17:08
7	05:47 21:12	06:18 20:45	06:54 19:54	07:29 18:56	18:29 (18) 18:32 (18)	07:10 17:07
8	05:48 21:12	06:19 20:43	06:55 19:52	07:31 18:54	18:32 (18) 18:32 (18)	07:11 17:06
9	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:52	18:32 (18) 18:32 (18)	07:12 17:05
10	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	18:33 (18) 18:33 (18)	07:14 17:04
11	05:50 21:11	06:22 20:39	06:58 19:46	07:34 18:49	18:34 (18) 18:34 (18)	07:15 17:02
12	05:51 21:10	06:23 20:38	07:00 19:44	07:36 18:47	18:35 (18) 18:35 (18)	07:16 17:01
13	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:45	18:36 (18) 18:36 (18)	07:18 17:00
14	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	18:37 (18) 18:37 (18)	07:19 16:59
15	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	18:38 (18) 18:38 (18)	07:21 16:58
16	05:55 21:08	06:28 20:31	07:04 19:37	07:41 18:40	18:39 (18) 18:39 (18)	07:22 16:57
17	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:39	18:40 (18) 18:40 (18)	07:23 16:56
18	05:56 21:06	06:30 20:28	07:07 19:33	07:43 18:37	18:41 (18) 18:41 (18)	07:24 16:55
19	05:57 21:05	06:32 20:27	07:08 19:31	07:44 18:35	18:42 (18) 18:42 (18)	07:26 16:54
20	05:58 21:05	06:33 20:25	07:09 19:29	07:46 18:34	18:43 (18) 18:43 (18)	07:27 16:54
21	05:59 21:04	06:34 20:23	07:10 19:28	07:47 18:32	18:44 (18) 18:44 (18)	07:28 16:53
22	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	18:45 (18) 18:45 (18)	07:30 16:52
23	06:01 21:02	06:36 20:20	07:12 19:24	07:50 18:29	18:46 (18) 18:46 (18)	07:31 16:51
24	06:02 21:01	06:37 20:18	07:14 19:22	07:51 18:27	18:47 (18) 18:47 (18)	07:32 16:51
25	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	18:48 (18) 18:48 (18)	07:33 16:50
26	06:04 20:59	06:40 20:15	07:16 19:18	07:54 18:24	18:49 (18) 18:49 (18)	07:35 16:49
27	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:22	18:50 (18) 18:50 (18)	07:36 16:48
28	06:07 20:57	06:42 20:12	07:18 19:14	07:56 18:21	18:51 (18) 18:51 (18)	07:37 16:48
29	06:08 20:56	06:43 20:10	07:20 19:13	07:58 18:19	18:52 (18) 18:52 (18)	07:38 16:48
30	06:09 20:55	06:44 20:08	07:21 19:11	07:59 18:18	18:53 (18) 18:53 (18)	07:40 16:47
31	06:10 20:54	06:46 20:06		08:00 18:17		08:01 16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case		186	56	69	121	989
Sun reduction		0.74	0.69	0.63	0.50	0.49
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.53	0.56	0.56	0.70	0.70
Total reduction		0.39	0.38	0.35	0.35	0.34
Total, real		73	21	24	42	337

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H302 - H302

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	08:26 (22)	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	08:06 (22)
	16:55	3 08:29 (22)	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47	20 16:20 (22)
2	08:02	08:26 (22)	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	08:07 (22)
	16:56	4 08:30 (22)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	18 16:20 (22)
3	08:02	08:26 (22)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43	08:08 (22)
	16:57	4 08:30 (22)	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46	16 16:19 (22)
4	08:02	08:26 (22)	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44	08:09 (22)
	16:58	5 08:31 (22)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46	13 16:18 (22)
5	08:02	08:26 (22)	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45	08:10 (22)
	16:59	7 16:31 (20)	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46	11 16:18 (22)
6	08:01	08:26 (22)	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46	08:11 (22)
	17:00	10 16:33 (20)	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:08	16:45	10 16:18 (20)
7	08:01	08:25 (22)	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47	08:13 (22)
	17:01	11 16:33 (20)	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45	7 16:18 (20)
8	08:01	08:25 (22)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	08:14 (22)
	17:02	13 16:34 (20)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45	5 08:19 (22)
9	08:01	08:25 (22)	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49	08:14 (22)
	17:03	16 16:36 (20)	17:45	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45	4 08:18 (22)
10	08:01	08:24 (22)	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50	08:15 (22)
	17:05	17 16:36 (20)	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45	4 08:19 (22)
11	08:00	08:24 (22)	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51	08:16 (22)
	17:06	20 16:38 (20)	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45	3 08:19 (22)
12	08:00	08:23 (22)	07:30	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:16	07:52	08:17 (22)
	17:07	21 16:39 (20)	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45	2 08:19 (22)
13	08:00	08:23 (22)	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53	08:18 (22)
	17:08	23 16:40 (20)	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45	2 08:20 (22)
14	07:59	08:22 (22)	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	16:13 (20)	07:53
	17:09	25 16:41 (20)	17:52	19:28	20:06	20:43	21:10	21:09	20:35	19:41	18:44	16:59	9 16:22 (20)	16:45
15	07:59	08:22 (22)	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	16:12 (20)	07:54
	17:11	27 16:43 (20)	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	13 16:25 (20)	16:46
16	07:58	08:21 (22)	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	16:10 (20)	07:55
	17:12	29 16:44 (20)	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16 16:26 (20)	16:46
17	07:57	08:20 (22)	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:58 (22)	07:56
	17:13	32 16:45 (20)	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	25 16:28 (20)	16:46
18	07:57	08:20 (22)	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:24	07:57 (22)	07:56
	17:14	33 16:47 (20)	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	31 16:28 (20)	16:46
19	07:56	08:19 (22)	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:55 (22)	07:57
	17:16	34 16:48 (20)	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	35 16:28 (20)	16:47
20	07:55	08:18 (22)	07:18	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:55 (22)	07:57
	17:17	37 16:50 (20)	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	36 16:28 (20)	16:47
21	07:55	08:18 (22)	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:54 (22)	07:58
	17:18	37 16:51 (20)	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	37 16:27 (20)	16:48
22	07:54	08:20 (22)	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:54 (22)	07:59
	17:20	36 16:53 (20)	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	37 16:26 (20)	16:48
23	07:53	08:21 (22)	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:56 (22)	07:59
	17:21	35 16:54 (20)	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:51	34 16:25 (20)	16:49
24	07:52	08:23 (22)	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:57 (22)	07:59
	17:22	31 16:54 (20)	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	33 16:24 (20)	16:49
25	07:51	08:25 (22)	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	07:58 (22)	08:00
	17:24	25 16:53 (20)	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	31 16:23 (20)	16:50
26	07:51	16:37 (20)	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00 (22)	08:00
	17:25	16 16:53 (20)	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	29 16:23 (20)	16:51
27	07:50	16:39 (20)	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01 (22)	08:01
	17:26	13 16:52 (20)	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	27 16:22 (20)	16:51
28	07:49	16:42 (20)	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:02 (22)	08:01
	17:28	8 16:50 (20)	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	25 16:21 (20)	16:52
29	07:48			07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:03 (22)	08:01
	17:29			19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	24 16:21 (20)	16:53
30	07:47			07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:05 (22)	08:01
	17:31			19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	22 16:21 (20)	16:53
31	07:46			07:09		05:44		06:10	06:46		08:00		08:01	08:26 (22)
	17:32			19:49		21:00		20:53	20:06		18:17		16:54	2 08:28 (22)
Potential sun hours	287		292	369	403	458	464	471	435	377	341	289	276	
Total, worst case		572									464		120	
Sun reduction		0.57									0.50		0.49	
Oper. time red.		0.98									0.98		0.98	
Wind dir. red.		0.63									0.62		0.66	
Total reduction		0.35									0.30		0.32	
Total, real		200									141		38	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H303 - H303

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02	07:45	08:08 (28)	07:04	07:07	07:28 (19)	06:17	05:44
	16:56	17:33	24 08:32 (28)	18:11	19:51	26 07:54 (19)	20:28	21:01
2	08:02	07:43	08:09 (28)	07:02	07:06	07:26 (19)	06:15	05:43
	16:57	17:35	22 08:31 (28)	18:12	19:52	29 07:55 (19)	20:29	21:02
3	08:02	07:42	08:11 (28)	07:00	07:04	07:24 (19)	06:14	05:43
	16:57	17:36	20 08:31 (28)	18:14	19:53	31 07:55 (19)	20:30	21:03
4	08:02	07:41	08:12 (28)	06:59	07:02	07:22 (19)	06:12	05:42
	16:58	17:38	18 08:30 (28)	18:15	19:54	33 07:55 (19)	20:31	21:04
5	08:02	07:40	08:13 (28)	06:57	07:00	07:20 (19)	06:11	05:42
	16:59	17:39	15 08:28 (28)	18:16	19:55	35 07:55 (19)	20:32	21:05
6	08:02	07:39	08:16 (28)	06:55	06:58	07:18 (19)	06:10	05:42
	17:00	17:41	10 08:26 (28)	18:18	19:57	37 07:55 (19)	20:34	21:05
7	08:01	07:37		06:53	06:57	07:17 (19)	06:08	05:41
	17:01	17:42		18:19	19:58	39 07:56 (19)	20:35	21:06
8	08:01	07:36		07:52	06:55	07:15 (19)	06:07	05:41
	17:03	17:43		18:20	19:59	41 07:56 (19)	20:36	21:07
9	08:01	07:35		07:50	06:53	07:14 (19)	06:06	05:41
	17:04	17:45		19:21	20:00	41 07:55 (19)	20:37	21:08
10	08:01	07:33		07:48	06:51	07:14 (19)	06:04	05:40
	17:05	17:46		19:23	20:02	41 07:55 (19)	20:38	21:08
11	08:00	07:32		07:46	06:49	07:14 (19)	06:03	05:40
	17:06	17:48		19:24	20:03	41 07:55 (19)	20:40	21:09
12	08:00	07:31		07:44	06:48	07:14 (19)	06:02	05:40
	17:07	17:49		19:25	20:04	40 07:54 (19)	20:41	21:09
13	08:00	07:29		07:43	06:46	07:14 (19)	06:01	05:40
	17:08	17:50		19:27	20:05	40 07:54 (19)	20:42	21:10
14	07:59	07:28		07:41	06:44	07:14 (19)	06:00	05:40
	17:09	17:52		19:28	20:07	38 07:52 (19)	20:43	21:10
15	07:59	07:26		07:39	06:42	07:15 (19)	05:58	05:40
	17:11	17:53		19:29	20:08	37 07:52 (19)	20:44	21:11
16	07:58	08:21 (28)	07:25	07:37	06:41	07:15 (19)	05:57	05:40
	17:12	3 08:24 (28)	17:55	19:30	20:09	36 07:51 (19)	20:45	21:11
17	07:58	08:21 (28)	07:23	07:35	06:39	07:15 (19)	05:56	05:40
	17:13	5 08:26 (28)	17:56	19:32	20:10	35 07:50 (19)	20:46	21:12
18	07:57	08:20 (28)	07:22	07:33	06:37	07:17 (19)	05:55	05:40
	17:14	7 08:27 (28)	17:57	19:33	20:12	32 07:49 (19)	20:47	21:12
19	07:56	08:19 (28)	07:20	07:32	06:36	07:17 (19)	05:54	05:40
	17:16	8 08:27 (28)	17:59	19:34	20:13	30 07:47 (19)	20:49	21:13
20	07:56	08:18 (28)	07:19	07:30	06:34	07:18 (19)	05:53	05:40
	17:17	10 08:28 (28)	18:00	19:36	20:14	27 07:45 (19)	20:50	21:13
21	07:55	08:18 (28)	07:17	07:28	06:32	07:20 (19)	05:52	05:40
	17:18	12 08:30 (28)	18:00	19:37	20:15	24 07:44 (19)	20:51	21:13
22	07:54	08:17 (28)	07:15	07:26	06:31	07:22 (19)	05:51	05:40
	17:20	13 08:30 (28)	18:01	19:38	20:16	19 07:41 (19)	20:52	21:13
23	07:53	08:16 (28)	07:14	07:24	06:29	07:25 (19)	05:50	05:41
	17:21	15 08:31 (28)	18:03	19:39	20:18	13 07:38 (19)	20:53	21:14
24	07:52	08:15 (28)	07:12	07:22	06:27		05:50	05:41
	17:22	16 08:31 (28)	18:04	19:41	20:19		20:54	21:14
25	07:52	08:14 (28)	07:10	07:20	06:26		05:49	05:41
	17:24	18 08:32 (28)	18:06	19:42	20:20		20:55	21:14
26	07:51	08:13 (28)	07:09	07:19	06:24		05:48	05:42
	17:25	19 08:32 (28)	18:07	19:43	20:21		20:56	21:14
27	07:50	08:12 (28)	07:07	07:17	06:23		05:47	05:42
	17:27	21 08:33 (28)	18:08	19:44	20:23		20:57	21:14
28	07:49	08:11 (28)	07:05	07:15		07:35 (19)	06:21	05:42
	17:28	22 08:33 (28)	18:10	19:46	12 07:47 (19)	20:24	20:58	21:14
29	07:48	08:10 (28)		07:13		07:33 (19)	06:20	05:42
	17:29	23 08:33 (28)		19:47	16 07:49 (19)	20:25	20:59	21:14
30	07:47	08:09 (28)		07:11		07:31 (19)	06:18	05:42
	17:31	24 08:33 (28)		19:48	20 07:51 (19)	20:26	21:00	21:14
31	07:46	08:09 (28)		07:09		07:29 (19)	05:44	
	17:32	24 08:33 (28)		19:49	23 07:52 (19)		21:01	
Potential sun hours	287	292	369	403	458	464		
Total, worst case	240	109	71	765				
Sun reduction	0.57	0.59	0.59	0.61				
Oper. time red.	0.98	0.98	0.98	0.98				
Wind dir. red.	0.68	0.68	0.58	0.58				
Total reduction	0.38	0.40	0.34	0.35				
Total, real	92	43	24	266				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H303 - H303

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:44 21:14	06:11 20:52	06:47 20:05	07:13 (19) 19:09	07:22 17:15	07:41 16:47	
2	05:44 21:14	06:12 20:51	06:48 20:03	07:13 (19) 19:07	07:23 17:14	07:42 16:47	
3	05:45 21:14	06:13 20:50	06:49 20:01	07:12 (19) 19:05	07:25 17:13	07:43 16:46	
4	05:46 21:13	06:14 20:49	06:50 19:59	07:12 (19) 19:03	07:26 17:11	07:44 16:46	
5	05:46 21:13	06:16 20:47	06:52 19:57	07:13 (19) 19:02	07:27 17:10	07:45 (28) 16:46	
6	05:47 21:13	06:17 20:46	06:53 19:56	07:14 (19) 19:00	07:28 17:09	07:46 (28) 16:46	
7	05:48 21:12	06:18 20:45	06:54 19:54	07:15 (19) 18:56	07:29 17:07	07:47 (28) 16:45	
8	05:48 21:12	06:19 20:43	06:55 19:52	07:17 (19) 18:54	07:31 17:06	07:48 (28) 16:45	
9	05:49 21:12	06:20 20:42	06:56 19:50	07:18 (19) 18:53	07:32 17:05	07:49 (28) 16:45	
10	05:50 21:11	06:21 20:41	06:57 19:48	07:19 (19) 18:51	07:33 17:04	07:50 (28) 16:45	
11	05:51 21:11	06:22 20:39	06:59 19:46	07:20 (19) 18:49	07:34 17:03	07:51 (28) 16:45	
12	05:51 21:10	06:24 20:38	07:00 19:45	07:21 (19) 18:47	07:36 17:01	07:52 (28) 16:45	
13	05:52 21:10	06:25 20:36	07:01 19:43	07:22 (19) 18:45	07:37 17:00	07:53 (28) 16:45	
14	05:53 21:09	06:26 20:35	07:02 19:41	07:23 (19) 18:44	07:38 16:59	07:53 (28) 16:46	
15	05:54 21:08	06:27 20:33	07:03 19:39	07:24 (19) 18:42	07:39 16:58	07:54 (28) 16:46	
16	05:55 21:08	06:28 20:32	07:04 19:37	07:26 (19) 18:40	07:41 16:57	07:55 (28) 16:46	
17	05:56 21:07	06:29 20:30	07:06 19:35	07:27 (19) 18:39	07:42 16:56	07:56 (28) 16:46	
18	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:43 16:55	07:56 (28) 16:47	
19	05:58 21:05	06:32 20:27	07:36 (19) 07:37 (19)	07:08 19:31	07:45 18:35	16 08:05 (28)	07:57 (28) 16:47
20	05:59 21:05	06:33 20:25	07:29 (19) 07:44 (19)	07:09 19:30	07:46 18:34	15 08:05 (28)	07:58 (28) 16:47
21	05:59 21:04	06:34 20:24	07:26 (19) 07:46 (19)	07:10 19:28	07:47 18:32	13 08:05 (28)	07:58 (28) 16:48
22	06:00 21:03	06:35 20:22	07:25 (19) 07:49 (19)	07:11 19:26	07:48 18:30	10 08:04 (28)	07:59 (28) 16:48
23	06:01 21:02	06:36 20:20	07:23 (19) 07:50 (19)	07:13 19:24	07:50 18:29	8 08:04 (28)	07:59 (28) 16:49
24	06:03 21:01	06:38 20:19	07:21 (19) 07:51 (19)	07:14 19:22	07:51 18:27	7 08:04 (28)	08:00 (28) 16:49
25	06:04 21:00	06:39 20:17	07:19 (19) 07:52 (19)	07:15 19:20	07:52 18:26	5 08:03 (28)	08:00 (28) 16:50
26	06:05 20:59	06:40 20:15	07:18 (19) 07:52 (19)	07:16 19:18	07:54 18:24	3 08:03 (28)	08:00 (28) 16:51
27	06:06 20:58	06:41 20:13	07:17 (19) 07:53 (19)	07:17 19:16	07:55 18:23	1 08:02 (28)	08:01 (28) 16:51
28	06:07 20:57	06:42 20:12	07:16 (19) 07:53 (19)	07:19 19:15	07:56 18:21		08:01 (28) 16:52
29	06:08 20:56	06:43 20:10	07:15 (19) 07:53 (19)	07:20 19:13	07:58 18:20		08:01 (28) 16:53
30	06:09 20:55	06:45 20:08	07:14 (19) 07:53 (19)	07:21 19:11	07:59 18:18		08:01 (28) 16:54
31	06:10 20:54	06:46 20:06	07:14 (19) 07:54 (19)	08:00 18:17	08:00 18:17		08:02 (28) 16:54
Potential sun hours	471	435	377	341	289	276	
Total, worst case		374		476		352	
Sun reduction		0.74		0.69		0.50	
Oper. time red.		0.98		0.98		0.98	
Wind dir. red.		0.58		0.58		0.68	
Total reduction		0.42		0.39		0.34	
Total, real		158		187		119	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H305 - H305

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	07:02 17:15	07:41 16:47	
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:43 21:02	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:47	
3	08:02 16:58	07:42 17:36	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	07:04 17:13	07:43 16:46	
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:46 21:13	06:15 20:49	06:50 19:59	07:26 19:04	07:06 17:11	07:44 16:46	
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:32	05:42 21:05	05:46 21:13	06:16 20:47	06:52 19:58	07:27 19:02	07:07 17:10	07:45 16:46	
6	08:02 17:00	07:39 17:41	06:55 18:18	06:58 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	07:09 17:09	07:46 16:46	
7	08:02 17:02	07:37 17:42	06:53 18:19	06:57 19:58	06:08 20:35	05:41 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:07	07:47 16:46	
8	08:01 17:03	07:36 17:43	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:31 18:54	07:11 17:06	07:48 16:45	
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53	07:13 17:05	07:49 16:45	
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:41	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45	
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:40	05:40 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:34 18:49	07:15 17:03	07:51 16:45	
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	06:02 20:41	05:40 21:10	05:51 21:10	06:24 20:38	07:00 19:45	07:36 18:47	07:17 17:02	07:52 16:45	
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:00	07:53 16:46	
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	2 07:04 (16) 07:06 (16)	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:01 (16) 07:06 (16)	07:02 19:41	07:38 18:44	07:19 16:59
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	5 07:08 (16) 07:08 (16)	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	06:58 (16) 07:09 (16)	07:03 19:39	07:40 18:42	07:21 16:58
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	7 07:08 (16) 07:08 (16)	05:57 20:45	05:40 21:12	05:55 21:08	06:28 20:32	06:56 (16) 07:11 (16)	07:04 19:37	07:41 18:40	07:22 16:57
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	10 07:09 (16) 07:09 (16)	05:56 20:46	05:40 21:12	05:56 21:07	06:29 20:30	06:54 (16) 07:12 (16)	07:06 19:35	07:42 18:39	07:23 16:56
18	07:57 17:15	07:22 17:57	07:33 19:33	06:37 20:12	12 06:58 (16) 07:10 (16)	05:55 20:48	05:40 21:12	05:57 21:06	06:31 20:28	06:53 (16) 07:13 (16)	07:07 19:33	07:43 18:37	07:25 16:56
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	13 06:56 (16) 07:09 (16)	05:54 20:49	05:40 21:13	05:58 21:06	06:32 20:27	06:54 (16) 07:13 (16)	07:08 19:32	07:45 18:35	07:26 16:55
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	15 06:54 (16) 07:09 (16)	05:53 20:50	05:40 21:13	05:59 21:05	06:33 20:25	06:55 (16) 07:13 (16)	07:09 19:30	07:46 18:34	07:27 16:54
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	16 06:53 (16) 07:09 (16)	05:52 20:51	05:40 21:13	06:00 21:04	06:34 20:24	06:57 (16) 07:14 (16)	07:10 19:28	07:47 18:32	07:29 16:53
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:17	17 06:51 (16) 07:08 (16)	05:51 20:52	05:40 21:13	06:01 21:03	06:35 20:22	06:58 (16) 07:14 (16)	07:11 19:26	07:49 18:30	07:30 16:52
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	18 06:50 (16) 07:08 (16)	05:50 20:53	05:41 21:14	06:02 21:02	06:36 20:20	06:59 (16) 07:14 (16)	07:13 19:24	07:50 18:29	07:31 16:52
24	07:53 17:22	07:12 18:04	07:22 19:41	06:28 20:19	19 06:48 (16) 07:07 (16)	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:00 (16) 07:13 (16)	07:14 19:22	07:51 18:27	07:32 16:51
25	07:52 17:24	07:11 18:06	07:20 19:42	06:26 20:20	20 06:47 (16) 07:07 (16)	05:49 20:55	05:41 21:14	06:04 21:00	06:39 20:17	07:01 (16) 07:12 (16)	07:15 19:20	07:52 18:26	07:34 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:21	17 06:48 (16) 07:05 (16)	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:02 (16) 07:11 (16)	07:16 19:18	07:54 18:24	07:35 16:50
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	15 06:49 (16) 07:04 (16)	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:03 (16) 07:10 (16)	07:17 19:16	07:55 18:23	07:36 16:49
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	10 06:51 (16) 07:01 (16)	05:47 20:58	05:42 21:14	06:07 20:57	06:42 20:12	07:04 (16) 07:09 (16)	07:19 19:15	07:56 18:21	07:37 16:48
29	07:48 17:29	07:05 19:47	07:13 20:25	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	06:43 20:10	07:05 (16) 07:07 (16)	07:20 19:13	07:58 18:20	07:38 16:48
30	07:47 17:31	07:04 19:48	07:11 20:26	06:18 20:26	05:45 21:00	05:43 21:14	06:09 20:55	06:45 20:08	06:45 20:08	07:21 19:11	07:59 18:18	07:40 16:48	08:01 16:54
31	07:46 17:32	07:09 19:49	07:09 20:09	06:18 20:09	05:45 21:01	05:43 21:01	06:09 20:54	06:45 20:07	06:45 20:07	07:21 18:17	07:59 17:00	07:40 16:46	08:01 16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	
Total, worst case				196									
Sun reduction				0.61									
Oper. time red.				0.98									
Wind dir. red.				0.53									
Total reduction				0.32									
Total, real				63									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H307 - H307

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:01	06:35	07:11	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:02	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H308 - H308

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H309 - H309

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H310 - H310

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H311 - H311

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H312 - H312

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H313 - H313

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H314 - H314

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H315 - H315

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H316 - H316

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H317 - H317

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51		06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53				
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52		06:15 20:29	05:43 21:03	05:44 21:14	06:12 20:51	17 07:26 (11)	07:09 (11)	07:22 19:09	
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 19:53		06:14 20:30	05:43 21:03	05:45 21:14	06:13 20:50	15 07:25 (11)	07:11 (11)	07:25 19:05	
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 19:54		06:12 20:31	05:42 21:04	05:46 21:14	06:15 20:49	13 07:24 (11)	07:12 (11)	07:26 19:05	
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:56		06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:48	10 07:22 (11)	07:13 (11)	07:27 19:04	
6	08:02 17:00	07:39 17:41	06:55 18:18	06:58 19:57		06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	7 07:20 (11)	07:14 (11)	07:28 19:00	
7	08:02 17:02	07:38 17:42	06:53 18:19	06:57 19:58	3 07:22 (11)	06:08 20:35	05:41 21:06	05:48 21:13	06:18 20:45	3 07:17 (11)	07:10 (11)	07:30 19:00	
8	08:01 17:03	07:36 17:43	07:52 18:20	06:55 19:59	7 07:17 (11)	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:44			07:31 19:52	
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	10 07:25 (11)	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42			07:32 19:50	
10	08:01 17:05	07:34 17:46	07:48 19:23	06:51 20:02	13 07:13 (11)	06:04 20:37	05:40 21:08	05:49 21:11	06:21 20:41			07:33 19:48	
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	15 07:26 (11)	06:03 20:40	05:51 21:09	06:23 21:11	06:23 20:39			07:35 19:47	
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	17 07:27 (11)	06:02 20:41	05:51 21:10	06:24 20:38	07:00 19:45			07:36 18:47	
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:06	19 07:27 (11)	06:01 20:42	05:50 21:10	06:25 20:36	07:01 19:43			07:37 18:46	
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	21 07:27 (11)	06:00 20:43	05:53 21:11	06:26 20:35	07:02 19:41			07:38 18:44	
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	23 07:28 (11)	06:03 20:44	05:58 21:11	06:27 20:33	07:03 19:39			07:40 18:42	
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	24 07:27 (11)	06:01 20:45	05:57 21:12	06:28 20:32	07:04 19:37			07:41 18:40	
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	26 07:27 (11)	05:56 20:47	05:50 21:12	06:29 20:30	07:06 19:35			07:42 18:39	
18	07:57 17:15	07:22 17:57	07:33 19:33	06:37 20:12	27 07:26 (11)	05:55 20:48	05:57 21:12	06:31 20:29	07:07 (11)	6 07:19 (11)	07:09 (11)	07:43 18:37	
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	28 07:25 (11)	05:54 20:49	05:58 21:13	06:32 20:27	07:08 (11)	14 07:23 (11)	07:07 (11)	07:45 18:35	
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	28 07:25 (11)	05:53 20:50	05:59 21:13	06:33 20:25	07:09 (11)	17 07:24 (11)	07:09 (11)	07:46 18:34	
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	27 07:24 (11)	05:52 20:51	06:00 21:13	06:34 20:24	07:10 (11)	21 07:26 (11)	07:10 (11)	07:47 18:32	
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	25 07:23 (11)	05:51 20:52	06:01 21:14	06:35 20:22	07:12 (11)	24 07:28 (11)	07:12 (11)	07:49 18:30	
23	07:54 17:21	07:14 18:03	07:24 19:39	06:29 20:18	23 07:22 (11)	05:50 20:53	05:41 21:14	06:36 20:20	07:13 (11)	25 07:28 (11)	07:13 (11)	07:50 18:29	
24	07:53 17:22	07:12 18:04	07:22 19:41	06:28 20:19	21 07:21 (11)	05:50 20:54	05:41 21:14	06:38 20:19	07:14 (11)	27 07:29 (11)	07:14 (11)	07:51 18:29	
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	17 07:18 (11)	05:49 20:55	05:41 21:14	06:39 20:17	07:15 (11)	28 07:29 (11)	07:15 (11)	07:52 18:26	
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:23	12 07:16 (11)	05:48 20:56	05:42 21:14	06:40 20:15	07:16 (11)	28 07:29 (11)	07:16 (11)	07:54 18:24	
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	3 07:11 (11)	05:47 20:57	05:42 21:14	06:41 20:14	07:17 (11)	27 07:29 (11)	07:17 (11)	07:55 18:23	
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24		05:46 20:58	05:42 21:14	06:42 20:12	07:19 (11)	26 07:29 (11)	07:19 (11)	07:57 18:21	
29	07:48 17:29		07:13 19:47	06:20 20:25		05:45 20:59	05:43 21:14	06:44 20:10	07:20 (11)	24 07:28 (11)	07:19 (11)	07:58 18:20	
30	07:47 17:31		07:11 19:48	06:18 20:26		05:45 21:00	05:43 21:14	06:45 20:08	07:21 (11)	23 07:28 (11)	07:19 (11)	07:59 18:18	
31	07:46 17:32		07:09 19:49			05:45 21:01	06:10 20:54	06:46 20:07	07:08 (11)	21 07:28 (11)	07:19 (11)	08:01 18:17	
Potential sun hours	287	292	369	403		458	464	471	435		377	341	
Total, worst case				389				330	65			289	276
Sun reduction				0.61				0.74	0.69				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.55				0.55	0.55				
Total reduction				0.33				0.40	0.37				
Total, real				129				132	24				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
	Sun set (hh:mm)					

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H318 - H318

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:22	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:01	06:35	07:11	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:02	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H319 - H319

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June						
1	08:02	07:45	08:07 (12)	07:04	07:52 (12)	07:08	06:17	05:44	20:21 (11)			
	16:56	17:33	17	08:24 (12)	18:11	39	08:31 (12)	19:51	20:28	21:02	14	20:35 (11)
2	08:02	07:43	08:05 (12)	07:02	07:54 (12)	07:06	06:15	05:43	20:22 (11)			
	16:56	17:35	20	08:25 (12)	18:12	36	08:30 (12)	19:52	20:29	21:02	15	20:37 (11)
3	08:02	07:42	08:04 (12)	07:00	07:55 (12)	07:04	06:14	05:43	20:21 (11)			
	16:57	17:36	24	08:28 (12)	18:14	33	08:28 (12)	19:53	20:30	21:03	16	20:37 (11)
4	08:02	07:41	08:03 (12)	06:59	07:56 (12)	07:02	06:12	05:42	20:21 (11)			
	16:58	17:38	27	08:30 (12)	18:15	29	08:25 (12)	19:54	20:31	21:04	17	20:38 (11)
5	08:02	07:40	08:02 (12)	06:57	07:58 (12)	07:00	06:11	05:42	20:21 (11)			
	16:59	17:39	29	08:31 (12)	18:16	24	08:22 (12)	19:56	20:32	21:05	17	20:38 (11)
6	08:02	07:39	08:00 (12)	06:55	08:02 (12)	06:58	06:10	05:42	20:21 (11)			
	17:00	17:41	32	08:32 (12)	18:18	17	08:19 (12)	19:57	20:34	21:06	18	20:39 (11)
7	08:02	07:37	07:59 (12)	06:53	08:09 (12)	06:57	06:08	05:41	20:21 (11)			
	17:01	17:42	34	08:33 (12)	18:19	2	08:11 (12)	19:58	20:35	21:06	19	20:40 (11)
8	08:01	07:36	07:58 (12)	07:52	06:55	06:07	05:41	20:22 (11)				
	17:02	17:43	37	08:35 (12)	18:20	19:59	20:36	21:07	19	20:41 (11)		
9	08:01	07:35	07:56 (12)	07:50	06:53	06:06	05:41	20:21 (11)				
	17:04	17:45	39	08:35 (12)	19:21	20:00	20:37	21:08	20	20:41 (11)		
10	08:01	07:33	07:55 (12)	07:48	06:51	06:04	05:40	20:21 (11)				
	17:05	17:46	41	08:36 (12)	19:23	20:02	20:38	21:08	20	20:41 (11)		
11	08:00	07:32	07:53 (12)	07:46	06:49	06:03	05:40	20:22 (11)				
	17:06	17:48	43	08:36 (12)	19:24	20:03	20:40	21:09	20	20:42 (11)		
12	08:00	07:31	07:52 (12)	07:44	06:48	06:02	05:40	20:22 (11)				
	17:07	17:49	45	08:37 (12)	19:25	20:04	20:41	21:10	21	20:43 (11)		
13	08:00	07:29	07:50 (12)	07:43	06:46	06:01	05:40	20:22 (11)				
	17:08	17:50	47	08:37 (12)	19:27	20:05	20:42	21:10	21	20:43 (11)		
14	07:59	07:28	07:49 (12)	07:41	06:44	06:00	05:40	20:23 (11)				
	17:09	17:52	49	08:38 (12)	19:28	20:07	20:43	21:11	21	20:44 (11)		
15	07:59	07:26	07:48 (12)	07:39	06:42	05:58	05:40	20:23 (11)				
	17:11	17:53	50	08:38 (12)	19:29	20:08	20:44	21:11	21	20:44 (11)		
16	07:58	07:25	07:48 (12)	07:37	06:41	05:57	05:40	20:23 (11)				
	17:12	17:55	51	08:39 (12)	19:31	20:09	20:45	21:12	22	20:45 (11)		
17	07:58	07:23	07:48 (12)	07:35	06:39	05:56	05:40	20:23 (11)				
	17:13	17:56	50	08:38 (12)	19:32	20:10	20:46	21:12	22	20:45 (11)		
18	07:57	07:22	07:48 (12)	07:33	06:37	05:55	05:40	20:23 (11)				
	17:14	17:57	51	08:39 (12)	19:33	20:12	20:48	21:12	22	20:45 (11)		
19	07:56	07:20	07:48 (12)	07:32	06:36	05:54	05:40	20:23 (11)				
	17:16	17:59	50	08:38 (12)	19:34	20:13	20:49	21:13	22	20:45 (11)		
20	07:56	07:19	07:48 (12)	07:30	06:34	05:53	05:40	20:23 (11)				
	17:17	18:00	51	08:39 (12)	19:36	20:14	20:50	21:13	23	20:46 (11)		
21	07:55	07:17	07:48 (12)	07:28	06:32	05:52	05:40	20:23 (11)				
	17:18	18:00	50	08:38 (12)	19:37	20:15	20:51	21:13	23	20:46 (11)		
22	07:54	07:15	07:48 (12)	07:26	06:31	05:51	05:40	20:24 (11)				
	17:20	18:01	49	08:37 (12)	19:38	20:17	20:52	21:13	23	20:47 (11)		
23	07:53	07:14	07:49 (12)	07:24	06:29	05:50	05:41	20:24 (11)				
	17:21	18:03	48	08:37 (12)	19:39	20:18	20:53	21:14	22	20:46 (11)		
24	07:53	07:12	07:49 (12)	07:22	06:27	05:49	05:41	20:24 (11)				
	17:22	18:04	47	08:36 (12)	19:41	20:19	20:54	2	20:28 (11)	21:14	22	20:46 (11)
25	07:52	07:11	07:49 (12)	07:20	06:26	05:49	05:41	20:25 (11)				
	17:24	18:06	46	08:35 (12)	19:42	20:20	20:55	4	20:29 (11)	21:14	22	20:47 (11)
26	07:51	07:09	07:50 (12)	07:19	06:24	05:48	05:42	20:25 (11)				
	17:25	18:07	45	08:35 (12)	19:43	20:21	20:56	7	20:31 (11)	21:14	22	20:47 (11)
27	07:50	07:07	07:50 (12)	07:17	06:23	05:47	05:42	20:25 (11)				
	17:26	18:08	44	08:34 (12)	19:44	20:23	20:57	8	20:31 (11)	21:14	21	20:46 (11)
28	07:49	07:06	07:51 (12)	07:15	06:21	05:46	05:42	20:26 (11)				
	17:28	18:10	41	08:32 (12)	19:46	20:24	20:58	10	20:32 (11)	21:14	21	20:47 (11)
29	07:48	07:13	07:47 (12)	07:11	06:20	05:46	05:43	20:27 (11)				
	17:29	18:11	40	08:31 (12)	19:47	20:25	20:59	11	20:33 (11)	21:14	22	20:47 (11)
30	07:47	08:09 (12)	07:46 (12)	07:10	06:18	05:45	05:43	20:28 (11)				
	17:31	6	08:15 (12)	19:48	20:26	21:00	12	20:34 (11)	21:14	21	20:47 (11)	
31	07:46	08:08 (12)	07:45 (12)	07:09	05:44	20:22 (11)	11	20:35 (11)				
	17:32	13	08:21 (12)	19:49	21:01	13	20:35 (11)					
Potential sun hours	287	292	369	403	458	464	609					
Total, worst case	19	1157	180	67	609							
Sun reduction	0.57	0.59	0.59	0.65	0.70							
Oper. time red.	0.98	0.98	0.98	0.98	0.98							
Wind dir. red.	0.66	0.66	0.66	0.68	0.68							
Total reduction	0.37	0.38	0.38	0.43	0.46							
Total, real	7	443	69	29	283							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H319 - H319

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	20:26 (11)	06:11	06:47	07:22	07:02
	21:14	20	20:46 (11)	20:52	20:05	19:09
2	05:44	20:27 (11)	06:12	06:48	07:23	07:03
	21:14	20	20:47 (11)	20:51	20:03	19:07
3	05:45	20:26 (11)	06:13	06:49	07:25	07:04
	21:14	20	20:46 (11)	20:50	20:01	19:05
4	05:46	20:27 (11)	06:14	06:50	07:26	07:06
	21:13	19	20:46 (11)	20:49	19:59	19:03
5	05:46	20:27 (11)	06:16	06:52	07:27	07:07
	21:13	18	20:45 (11)	20:47	19:58	19:02
6	05:47	20:27 (11)	06:17	06:53	07:28	07:09
	21:13	18	20:45 (11)	20:46	19:56	19:00
7	05:47	20:28 (11)	06:18	06:54	07:29	08:40 (12)
	21:13	17	20:45 (11)	20:45	19:54	18:56
8	05:48	20:27 (11)	06:19	06:55	07:31	08:35 (12)
	21:12	17	20:44 (11)	20:43	19:52	18:54
9	05:49	20:28 (11)	06:20	06:56	07:32	08:32 (12)
	21:12	16	20:44 (11)	20:42	19:50	18:53
10	05:50	20:29 (11)	06:21	06:57	07:33	08:30 (12)
	21:11	15	20:44 (11)	20:41	19:48	18:51
11	05:50	20:29 (11)	06:22	06:59	07:34	08:28 (12)
	21:11	15	20:44 (11)	20:39	19:46	18:49
12	05:51	20:29 (11)	06:24	07:00	07:36	08:26 (12)
	21:10	14	20:43 (11)	20:38	19:45	18:47
13	05:52	20:30 (11)	06:25	07:01	07:37	08:25 (12)
	21:10	12	20:42 (11)	20:36	19:43	18:45
14	05:53	20:31 (11)	06:26	07:02	07:38	08:24 (12)
	21:09	11	20:42 (11)	20:35	19:41	18:44
15	05:54	20:31 (11)	06:27	07:03	07:39	08:23 (12)
	21:08	10	20:41 (11)	20:33	19:39	18:42
16	05:55	20:32 (11)	06:28	07:04	07:41	08:21 (12)
	21:08	9	20:41 (11)	20:32	19:37	18:40
17	05:56	20:33 (11)	06:29	07:06	07:42	08:21 (12)
	21:07	7	20:40 (11)	20:30	19:35	18:39
18	05:57	20:34 (11)	06:31	07:07	07:43	08:20 (12)
	21:06	6	20:40 (11)	20:28	19:33	18:37
19	05:58	20:35 (11)	06:32	07:08	07:45	08:19 (12)
	21:06	3	20:38 (11)	20:27	19:31	18:35
20	05:58	20:36 (11)	06:33	07:09	07:46	08:19 (12)
	21:05	2	20:38 (11)	20:25	19:30	18:34
21	05:59	06:34	07:10	07:47	08:18 (12)	07:29
	21:04	06:34	07:10	07:47	08:18 (12)	07:29
22	06:00	06:35	07:11	07:48	08:18 (12)	07:30
	21:03	06:35	07:11	07:48	08:18 (12)	07:30
23	06:01	06:36	07:13	07:50	08:18 (12)	07:31
	21:02	06:36	07:13	07:50	08:18 (12)	07:31
24	06:02	06:38	07:14	07:51	08:18 (12)	07:32
	21:01	06:38	07:14	07:51	08:18 (12)	07:32
25	06:04	06:39	07:15	07:52	08:18 (12)	07:34
	21:00	06:39	07:15	07:52	08:18 (12)	07:34
26	06:05	06:40	07:16	07:54	08:18 (12)	07:35
	20:59	06:40	07:16	07:54	08:18 (12)	07:35
27	06:06	06:41	07:17	07:55	08:18 (12)	07:36
	20:58	06:41	07:17	07:55	08:18 (12)	07:36
28	06:07	06:42	07:19	07:56	08:19 (12)	07:37
	20:57	06:42	07:19	07:56	08:19 (12)	07:37
29	06:08	06:43	07:20	07:58	08:20 (12)	07:38
	20:56	06:43	07:20	07:58	08:20 (12)	07:38
30	06:09	06:45	07:21	07:59	09:07 (12)	16:48
	20:55	06:45	07:21	07:59	08:22 (12)	07:40
31	06:10	06:46	07:22	08:00	09:07 (12)	16:47
	20:54	06:46	07:22	08:00	08:23 (12)	08:02
Potential sun hours	471	435	377	341	289	276
Total, worst case	269			1065	315	
Sun reduction	0.76			0.63	0.50	
Oper. time red.	0.98			0.98	0.98	
Wind dir. red.	0.68			0.66	0.66	
Total reduction	0.50			0.41	0.32	
Total, real	136			436	102	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H320 - H320

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:08 (12)	06:11	06:47	07:22	07:02
	21:14	31 06:39 (12)	20:52	20:05	19:09	17:15
2	05:44	06:09 (12)	06:12	06:48	07:23	07:03
	21:14	31 06:40 (12)	20:51	20:03	19:07	17:14
3	05:45	06:09 (12)	06:13	06:49	07:25	07:04
	21:14	31 06:40 (12)	20:50	20:01	19:05	17:13
4	05:46	06:10 (12)	06:14	06:50	07:26	07:06
	21:13	30 06:40 (12)	20:49	19:59	19:03	17:11
5	05:46	06:10 (12)	06:16	06:52	07:27	07:07
	21:13	30 06:40 (12)	20:47	19:58	19:02	17:10
6	05:47	06:11 (12)	06:17	06:53	07:28	07:09
	21:13	29 06:40 (12)	20:46	19:56	19:00	17:09
7	05:48	06:12 (12)	06:18	06:54	07:29	07:10
	21:13	29 06:41 (12)	20:45	19:54	18:56	17:07
8	05:48	06:12 (12)	06:19	06:55	07:31	07:11
	21:12	28 06:40 (12)	20:43	19:52	18:54	17:06
9	05:49	06:13 (12)	06:20	06:56	07:32	07:13
	21:12	28 06:41 (12)	20:42	19:50	18:53	17:05
10	05:50	06:14 (12)	06:21	06:57	07:33	07:14
	21:11	27 06:41 (12)	20:41	19:48	18:51	17:04
11	05:51	06:15 (12)	06:22	06:59	07:34	07:15
	21:11	26 06:41 (12)	20:39	19:46	18:49	17:03
12	05:51	06:15 (12)	06:24	07:00	07:36	07:17
	21:10	26 06:41 (12)	20:38	19:45	18:47	17:01
13	05:52	06:16 (12)	06:25	07:01	07:37	07:18
	21:10	25 06:41 (12)	20:36	19:43	18:46	17:00
14	05:53	06:17 (12)	06:26	07:02	07:38	07:19
	21:09	24 06:41 (12)	20:35	19:41	18:44	16:59
15	05:54	06:18 (12)	06:27	07:03	07:39	07:21
	21:08	23 06:41 (12)	20:33	19:39	18:42	16:58
16	05:55	06:19 (12)	06:28	07:04	07:41	07:22
	21:08	22 06:41 (12)	20:32	19:37	18:40	16:57
17	05:56	06:20 (12)	06:29	07:06	07:42	07:23
	21:07	21 06:41 (12)	20:30	19:35	18:39	16:56
18	05:57	06:21 (12)	06:31	07:07	07:43	07:25
	21:06	20 06:41 (12)	20:28	19:33	18:37	16:55
19	05:58	06:22 (12)	06:32	07:08	07:45	07:26
	21:06	18 06:40 (12)	20:27	19:31	18:35	16:55
20	05:59	06:22 (12)	06:33	07:09	07:46	07:27
	21:05	17 06:39 (12)	20:25	19:30	18:34	16:54
21	05:59	06:23 (12)	06:34	07:10	07:47	07:29
	21:04	15 06:38 (12)	20:24	19:28	18:32	16:53
22	06:00	06:24 (12)	06:35	07:11	07:48	07:30
	21:03	14 06:38 (12)	20:22	19:26	18:30	16:52
23	06:01	06:25 (12)	06:36	07:13	07:50	07:31
	21:02	12 06:37 (12)	20:20	19:24	18:29	16:51
24	06:03	06:26 (12)	06:38	07:14	07:51	07:32
	21:01	10 06:36 (12)	20:19	19:22	18:27	16:51
25	06:04	06:27 (12)	06:39	07:15	07:52	07:34
	21:00	8 06:35 (12)	20:17	19:20	18:26	16:50
26	06:05	06:28 (12)	06:40	07:16	07:54	07:35
	20:59	6 06:34 (12)	20:15	19:18	18:24	16:49
27	06:06	06:29 (12)	06:41	07:17	07:55	07:36
	20:58	3 06:32 (12)	20:13	19:16	18:23	16:49
28	06:07		06:42	07:19	07:56	07:37
	20:57		20:12	19:15	18:21	8 08:31 (18)
29	06:08		06:43	07:20	07:58	08:39 (18)
	20:56		20:10	19:13	18:20	13 08:28 (18)
30	06:09		06:45	07:21	07:59	08:41 (18)
	20:55		20:08	19:11	18:18	17 08:41 (18)
31	06:10		06:46		08:00	16:47 14 08:50 (17)
	20:54		20:06		18:17	19 08:25 (18)
Potential sun hours	471	435	377	341	289	276
Total, worst case	584			57	188	851
Sun reduction	0.76			0.63	0.50	0.49
Oper. time red.	0.98			0.98	0.98	0.98
Wind dir. red.	0.56			0.67	0.67	0.70
Total reduction	0.42			0.42	0.34	0.34
Total, real	247			24	63	291

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H321 - H321

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02	15:14 (12)	07:45	07:04	07:07	06:17	05:44	
	16:56	44 15:58 (12)	17:33	18:11	19:50	20:28	21:02	
2	08:02	15:15 (12)	07:43	07:02	07:06	06:15	05:43	
	16:56	43 15:58 (12)	17:35	18:12	19:52	20:29	21:02	
3	08:02	15:15 (12)	07:42	07:00	07:04	06:14	05:43	
	16:57	43 15:58 (12)	17:36	18:14	19:53	20:30	21:03	
4	08:02	15:16 (12)	07:41	06:59	07:02	06:12	05:42	
	16:58	43 15:59 (12)	17:38	18:15	19:54	20:31	21:04	
5	08:02	15:17 (12)	07:40	06:57	07:00	06:11	05:42	
	16:59	42 15:59 (12)	17:39	18:16	19:55	20:32	21:05	
6	08:02	15:18 (12)	07:39	06:55	06:58	06:10	05:41	
	17:00	41 15:59 (12)	17:40	18:18	19:57	20:34	21:06	
7	08:01	15:18 (12)	07:37	06:53	07:14 (13)	06:57	06:08	05:41
	17:01	40 15:58 (12)	17:42	18:19	1 07:15 (13)	19:58	20:35	21:06
8	08:01	15:19 (12)	07:36	07:52	08:12 (13)	06:55	06:07	05:41
	17:02	40 15:59 (12)	17:43	18:20	4 08:16 (13)	19:59	20:36	21:07
9	08:01	15:21 (12)	07:35	07:50	08:10 (13)	06:53	06:06	05:41
	17:04	38 15:59 (12)	17:45	19:21	7 08:17 (13)	20:00	20:37	21:08
10	08:01	15:21 (12)	07:33	07:48	08:08 (13)	06:51	06:04	05:40
	17:05	37 15:58 (12)	17:46	19:23	10 08:18 (13)	20:02	20:38	21:08
11	08:00	15:22 (12)	07:32	07:46	08:06 (13)	06:49	06:03	05:40
	17:06	36 15:58 (12)	17:48	19:24	12 08:18 (13)	20:03	20:40	21:09
12	08:00	15:24 (12)	07:31	07:44	08:05 (13)	06:48	06:02	05:40
	17:07	35 15:59 (12)	17:49	19:25	14 08:19 (13)	20:04	20:41	21:09
13	08:00	15:25 (12)	07:29	07:42	08:03 (13)	06:46	06:01	05:40
	17:08	33 15:58 (12)	17:50	19:27	16 08:19 (13)	20:05	20:42	21:10
14	07:59	15:27 (12)	07:28	07:41	08:01 (13)	06:44	05:59	05:40
	17:09	31 15:58 (12)	17:52	19:28	18 08:19 (13)	20:07	20:43	21:11
15	07:59	15:28 (12)	07:26	07:39	07:59 (13)	06:42	05:58	05:40
	17:11	29 15:57 (12)	17:53	19:29	19 08:18 (13)	20:08	20:44	21:11
16	07:58	15:29 (12)	07:25	07:37	07:57 (13)	06:41	05:57	05:40
	17:12	27 15:56 (12)	17:54	19:30	20 08:17 (13)	20:09	20:45	21:11
17	07:58	15:31 (12)	07:23	07:35	07:55 (13)	06:39	05:56	05:40
	17:13	24 15:55 (12)	17:56	19:32	21 08:16 (13)	20:10	20:46	21:12
18	07:57	15:33 (12)	07:22	07:33	07:56 (13)	06:37	05:55	05:40
	17:14	21 15:54 (12)	17:57	19:33	20 08:16 (13)	20:12	20:48	21:12
19	07:56	15:35 (12)	07:20	07:31	07:57 (13)	06:36	05:54	05:40
	17:16	17 15:52 (12)	17:59	19:34	17 08:14 (13)	20:13	20:49	21:13
20	07:56	15:39 (12)	07:19	07:30	07:58 (13)	06:34	05:53	05:40
	17:17	9 15:48 (12)	18:00	19:36	14 08:12 (13)	20:14	20:50	21:13
21	07:55		07:17	07:28	08:01 (13)	06:32	05:52	05:40
	17:18		18:00	19:37	7 08:08 (13)	20:15	20:51	21:13
22	07:54		07:15	07:26		06:31	05:51	05:40
	17:20		18:01	19:38		20:16	20:52	21:13
23	07:53		07:14	07:24		06:29	05:50	05:41
	17:21		18:03	19:39		20:18	20:53	21:14
24	07:53		07:12	07:22		06:27	05:49	05:41
	17:22		18:04	19:41		20:19	20:54	21:14
25	07:52		07:10	07:20		06:26	05:49	05:41
	17:24		18:05	19:42		20:20	20:55	21:14
26	07:51		07:09	07:19		06:24	05:48	05:41
	17:25		18:07	19:43		20:21	20:56	21:14
27	07:50		07:07	07:17		06:23	05:47	05:42
	17:26		18:08	19:44		20:23	20:57	21:14
28	07:49		07:05	07:15		06:21	05:46	05:42
	17:28		18:10	19:46		20:24	20:58	21:14
29	07:48			07:13		06:20	05:46	05:43
	17:29			19:47		20:25	20:59	21:14
30	07:47			07:11		06:18	05:45	05:43
	17:31			19:48		20:26	21:00	21:14
31	07:46			07:09			05:44	
	17:32			19:49			21:01	
Potential sun hours	287	292	369	403	458	464		
Total, worst case	673		200					
Sun reduction	0.57		0.59					
Oper. time red.	0.98		0.98					
Wind dir. red.	0.57		0.61					
Total reduction	0.32		0.35					
Total, real	215		71					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H321 - H321

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	07:43 (13) 07:58 (13)	07:02 17:15	07:41 15:04 (12)
2	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	07:44 (13) 07:57 (13)	07:03 17:14	07:42 15:04 (12)
3	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	07:46 (13) 07:57 (13)	07:04 17:12	07:43 15:04 (12)
4	05:45 21:13	06:14 20:49	06:50 19:59	07:26 19:03	07:47 (13) 07:56 (13)	07:06 17:11	07:44 15:03 (12)
5	05:46 21:13	06:15 20:47	06:52 19:57	07:27 19:02	07:48 (13) 07:54 (13)	07:07 17:10	07:45 15:04 (12)
6	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	07:49 (13) 07:51 (13)	07:08 17:09	07:46 15:04 (12)
7	05:47 21:12	06:18 20:45	06:54 19:54	07:29 18:56	07:50 17:07	07:09 17:07	07:47 15:04 (12)
8	05:48 21:12	06:19 20:43	06:55 19:52	07:31 18:54	07:51 17:06	07:11 17:06	07:48 15:04 (12)
9	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53	07:13 17:05	07:13 17:05	07:49 15:04 (12)
10	05:50 21:11	06:21 20:41	06:57 19:48	07:33 18:51	07:14 17:04	07:14 17:04	07:50 15:05 (12)
11	05:50 21:11	06:22 20:39	06:59 19:46	07:34 18:49	07:15 17:03	07:15 17:03	07:51 15:04 (12)
12	05:51 21:10	06:24 20:38	07:00 19:45	07:36 18:47	07:17 17:01	07:17 17:01	07:52 15:04 (12)
13	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:45	07:18 17:00	07:18 17:00	07:53 15:05 (12)
14	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:19 16:59	07:19 16:59	07:54 15:05 (12)
15	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:21 16:58	07:21 16:58	07:54 15:06 (12)
16	05:55 21:08	06:28 20:32	07:04 19:37	07:41 18:40	07:22 16:57	07:22 16:57	07:55 15:05 (12)
17	05:56 21:07	06:29 20:30	07:06 19:35	07:42 18:39	07:23 16:56	07:23 16:56	07:56 15:06 (12)
18	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:25 16:55	07:25 16:55	07:56 15:07 (12)
19	05:57 21:06	06:32 20:27	07:08 19:31	07:45 18:35	07:26 16:55	07:26 16:55	07:57 15:07 (12)
20	05:58 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:27 16:54	07:58 15:07 (12)
21	05:59 21:04	06:34 20:24	07:10 19:28	07:47 18:32	07:29 16:53	07:29 16:53	07:58 15:07 (12)
22	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:30 16:52	07:30 16:52	07:59 15:08 (12)
23	06:01 21:02	06:36 20:20	07:13 19:24	07:49 18:29	07:31 16:51	07:31 16:51	07:59 15:08 (12)
24	06:02 21:01	06:38 20:19	07:14 19:22	07:51 18:27	07:32 16:51	07:32 16:51	08:00 15:10 (12)
25	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:34 16:50	07:34 16:50	08:00 15:10 (12)
26	06:04 20:59	06:40 20:15	07:16 19:18	07:54 18:24	07:35 16:49	07:35 16:49	08:00 15:10 (12)
27	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49	07:36 16:49	08:01 15:11 (12)
28	06:07 20:57	06:42 20:12	07:18 19:15	07:56 18:21	07:37 16:48	07:37 16:48	08:01 15:12 (12)
29	06:08 20:56	06:43 20:10	07:20 19:13	07:58 18:20	07:38 16:48	07:38 16:48	08:01 15:12 (12)
30	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	07:40 16:47	07:40 16:47	08:01 15:12 (12)
31	06:10 20:54	06:46 20:06		08:00 18:17			08:02 15:13 (12)
Potential sun hours	471	435	377	341	289	276	1354
Total, worst case			147	56	226		0.49
Sun reduction			0.69	0.63	0.50		0.98
Oper. time red.			0.98	0.98	0.98		0.57
Wind dir. red.			0.61	0.61	0.57		0.27
Total reduction			0.41	0.38	0.28		0.63
Total, real			61	21	63		372

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H322 - H322

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41				
	16:55	17:33	18:11	19:50	17	19:28 (12)	20:27	21:01	21:14	20:52	20:05	17:15	16:47			
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42				
	16:56	17:35	18:12	19:52	18	19:30 (12)	20:29	21:02	21:14	20:51	20:03	17:14	16:47			
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43				
	16:57	17:36	18:14	19:53	19	19:31 (12)	20:30	21:03	21:14	20:50	20:01	17:12	16:46			
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44				
	16:58	17:38	18:15	19:54	20	19:32 (12)	20:31	21:04	21:13	20:49	19:59	17:11	16:46			
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45				
	16:59	17:39	18:16	19:55	18	19:31 (12)	20:32	21:05	21:13	20:47	19:57	17:10	16:46			
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:08	07:46				
	17:00	17:40	18:17	19:57	15	19:29 (12)	20:34	21:05	21:13	20:46	19:56	17:08	16:46			
7	08:01	07:37	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47				
	17:01	17:42	18:19	19:58	11	19:27 (12)	20:35	21:06	21:12	20:45	19:54	17:07	16:45			
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	08:06 (14)	07:11	07:48			
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	20	19:26 (12)	18:54	17:06	16:45		
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	08:03 (14)	07:12	07:49			
	17:04	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	20	19:26 (12)	18:52	15	08:18 (14)	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	08:00 (14)	07:14	07:50			
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	19	19:24 (12)	18:51	19	08:19 (14)	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	08:00 (14)	07:15	07:51			
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18	19:22 (12)	18:49	21	08:21 (14)	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:58 (14)	07:17	07:52			
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	16	19:20 (12)	18:47	23	08:21 (14)	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:58 (14)	07:18	07:53			
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	15	19:18 (12)	18:45	24	08:22 (14)	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:59 (14)	07:19	07:53			
	17:09	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	13	19:16 (12)	18:44	22	08:21 (14)	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	08:01 (14)	07:21	07:54			
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	11	19:14 (12)	18:42	21	08:22 (14)	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	08:02 (14)	07:22	07:55			
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:32	19:37	9	19:12 (12)	18:40	20	08:22 (14)	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	08:03 (14)	07:23	07:56			
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	6	19:11 (12)	18:39	18	08:21 (14)	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	08:05 (14)	07:25	07:56			
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	3	19:09 (12)	18:37	16	08:21 (14)	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	08:06 (14)	07:26	07:57			
	17:16	17:59	4 07:45 (14)	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18	08:20 (14)	16:54	16:47		
20	07:56	07:19	07:39 (14)	07:30	06:34	05:53	05:40	05:58	06:33	07:09	08:08 (14)	07:27	07:58			
	17:17	18:00	7 07:46 (14)	19:35	20:14	20:50	21:13	21:05	20:25	19:29	17	08:20 (14)	16:54	16:47		
21	07:55	07:17	07:38 (14)	07:28	06:32	05:52	05:40	05:59	06:34	07:10	08:09 (14)	07:28	07:58			
	17:18	18:00	10 07:48 (14)	19:37	20:15	20:51	21:13	21:04	20:24	19:28	9	08:18 (14)	16:53	16:48		
22	07:54	07:15	07:36 (14)	07:26	06:31	05:51	05:40	06:00	06:35	07:11	08:10 (14)	07:30	07:59			
	17:20	18:01	13 07:49 (14)	19:38	20:16	20:52	21:13	21:03	20:22	19:26	8	08:17 (14)	16:52	16:48		
23	07:53	07:14	07:35 (14)	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59			
	17:21	18:03	15 07:50 (14)	19:39	20:18	20:53	21:14	21:02	20:20	19:24	08:15 (14)	16:51	16:49			
24	07:52	07:12	07:33 (14)	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00			
	17:22	18:04	17 07:50 (14)	19:40	20:19	20:54	21:14	21:01	20:19	19:22	08:15 (14)	16:51	16:49			
25	07:52	07:10	07:31 (14)	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:34	08:00			
	17:24	18:05	19 07:50 (14)	19:42	2 19:20 (12)	20:20	20:55	21:14	21:00	19:20	08:16 (14)	16:50	16:50			
26	07:51	07:09	07:30 (14)	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00			
	17:25	18:07	20 07:50 (14)	19:43	5 19:22 (12)	20:21	20:56	21:14	20:59	19:15	08:17 (14)	16:49	16:51			
27	07:50	07:07	07:28 (14)	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01			
	17:26	18:08	22 07:50 (14)	19:44	8 19:23 (12)	20:23	20:57	21:14	20:58	19:13	08:18 (14)	16:49	16:51			
28	07:49	07:05	07:26 (14)	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01			
	17:28	18:09	23 07:49 (14)	19:45	10 19:24 (12)	20:24	20:58	21:14	20:57	19:12	08:19 (14)	16:48	16:52			
29	07:48		07:13	06:20	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01			
	17:29		19:47	12 19:25 (12)	20:25	20:59	21:14	20:56	20:10	19:13	08:19 (14)	16:48	16:53			
30	07:47		07:11	06:18	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01			
	17:31		19:48	14 19:26 (12)	20:26	21:00	21:14	20:55	20:08	19:11	08:18 (14)	16:47	16:54			
31	07:46		07:09	06:11	06:11	05:44	05:44	06:10	06:46		08:00	08:02	08:02			
	17:32		19:49	16 19:27 (12)		21:01	21:01	20:54	20:06		18:17	16:54	16:54			
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276				
Total, worst case		150	171	118					193		254					
Sun reduction		0.59	0.59	0.61					0.69		0.63					
Oper. time red.		0.98	0.98	0.98					0.98		0.98					
Wind dir. red.		0.63	0.62	0.60					0.60		0.63					
Total reduction		0.36	0.36	0.36					0.41		0.39					
Total, real		54	61	42					78		98					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H323 - H323

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02	07:44	07:04	07:07	06:17	05:44	06:07 (14)
	16:55	17:33	18:11	19:50	20:27	21:01	52 06:59 (14)
2	08:02	07:43	07:02	07:06	06:15	05:43	06:07 (14)
	16:56	17:35	18:12	19:52	20:29	21:02	53 07:00 (14)
3	08:02	07:42	07:00	07:04	06:14	05:43	06:06 (14)
	16:57	17:36	18:13	19:53	20:30	21:03	54 07:00 (14)
4	08:02	07:41	06:58	07:02	07:22 (15)	06:12	05:42 06:06 (14)
	16:58	17:38	18:15	19:54	1 07:23 (15)	20:31	21:04 54 07:00 (14)
5	08:02	07:40	06:57	07:00	07:20 (15)	06:11	05:42 06:05 (14)
	16:59	17:39	18:16	19:55	5 07:25 (15)	20:32	21:05 55 07:00 (14)
6	08:02	07:39	06:55	06:58	07:18 (15)	06:09	05:41 06:05 (14)
	17:00	17:40	18:17	19:57	7 07:25 (15)	20:34	21:05 56 07:01 (14)
7	08:01	07:37	06:53	06:56	07:17 (15)	06:08	05:41 06:05 (14)
	17:01	17:42	18:19	19:58	10 07:27 (15)	20:35	21:06 56 07:01 (14)
8	08:01	07:36	07:51	06:55	07:15 (15)	06:07	05:41 06:04 (14)
	17:02	17:43	18:20	19:59	12 07:27 (15)	20:36	21:07 57 07:01 (14)
9	08:01	07:35	07:50	06:53	07:13 (15)	06:06	05:40 06:04 (14)
	17:04	17:45	19:21	20:00	14 07:27 (15)	20:37	21:08 58 07:02 (14)
10	08:01	07:33	07:48	06:51	07:11 (15)	06:04	05:40 06:05 (14)
	17:05	17:46	19:23	20:02	15 07:26 (15)	20:38	21:08 57 07:02 (14)
11	08:00	07:32	07:46	06:49	07:09 (15)	06:03	05:40 06:05 (14)
	17:06	17:47	19:24	20:03	17 07:26 (15)	20:39	21:09 57 07:02 (14)
12	08:00	07:30	07:44	06:48	07:08 (15)	06:02	05:40 06:05 (14)
	17:07	17:49	19:25	20:04	18 07:26 (15)	20:41	21:09 58 07:03 (14)
13	08:00	07:29	07:42	06:46	07:06 (15)	06:01	05:40 06:05 (14)
	17:08	17:50	19:27	20:05	19 07:25 (15)	20:42	13 06:37 (14) 21:10 58 07:03 (14)
14	07:59	07:28	07:41	06:44	07:04 (15)	05:59	06:21 (14) 05:40 06:06 (14)
	17:09	17:52	19:28	20:07	20 07:24 (15)	20:43	19 06:40 (14) 21:10 58 07:04 (14)
15	07:59	07:26	07:39	06:42	07:04 (15)	05:58	06:20 (14) 05:40 06:06 (14)
	17:11	17:53	19:29	20:08	19 07:23 (15)	20:44	23 06:43 (14) 21:11 58 07:04 (14)
16	07:58	07:25	07:37	06:41	07:04 (15)	05:57	06:19 (14) 05:40 06:06 (14)
	17:12	17:54	19:30	20:09	17 07:21 (15)	20:45	26 06:45 (14) 21:11 58 07:04 (14)
17	07:57	07:23	07:35	06:39	07:06 (15)	05:56	06:18 (14) 05:40 06:06 (14)
	17:13	17:56	19:32	20:10	13 07:19 (15)	20:46	29 06:47 (14) 21:12 58 07:04 (14)
18	07:57	07:22	07:33	06:37	07:09 (15)	05:55	06:17 (14) 05:40 06:06 (14)
	17:14	17:57	19:33	20:11	8 07:17 (15)	20:47	31 06:48 (14) 21:12 58 07:04 (14)
19	07:56	07:20	07:31	06:36	05:54	06:16 (14)	05:40 06:06 (14)
	17:16	17:59	19:34	20:13	20:49	33 06:49 (14)	21:12 59 07:05 (14)
20	07:56	07:19	07:30	06:34	05:53	06:15 (14)	05:40 06:06 (14)
	17:17	18:00	19:35	20:14	20:50	35 06:50 (14)	21:13 59 07:05 (14)
21	07:55	07:17	07:28	06:32	05:52	06:15 (14)	05:40 06:06 (14)
	17:18	18:00	19:37	20:15	20:51	37 06:52 (14)	21:13 59 07:05 (14)
22	07:54	07:15	07:26	06:31	05:51	06:14 (14)	05:40 06:07 (14)
	17:20	18:01	19:38	20:16	20:52	39 06:53 (14)	21:13 59 07:06 (14)
23	07:53	07:14	07:24	06:29	05:50	06:13 (14)	05:41 06:07 (14)
	17:21	18:03	19:39	20:18	20:53	41 06:54 (14)	21:14 59 07:06 (14)
24	07:52	07:12	07:22	06:27	05:49	06:12 (14)	05:41 06:07 (14)
	17:22	18:04	19:40	20:19	20:54	42 06:54 (14)	21:14 58 07:05 (14)
25	07:52	07:10	07:20	06:26	05:49	06:11 (14)	05:41 06:07 (14)
	17:24	18:05	19:42	20:20	20:55	44 06:55 (14)	21:14 58 07:05 (14)
26	07:51	07:09	07:18	06:24	05:48	06:11 (14)	05:41 06:08 (14)
	17:25	18:07	19:43	20:21	20:56	45 06:56 (14)	21:14 58 07:06 (14)
27	07:50	07:07	07:17	06:23	05:47	06:10 (14)	05:42 06:08 (14)
	17:26	18:08	19:44	20:23	20:57	46 06:56 (14)	21:14 58 07:06 (14)
28	07:49	07:05	07:15	06:21	05:46	06:09 (14)	05:42 06:09 (14)
	17:28	18:09	19:45	20:24	20:58	48 06:57 (14)	21:14 58 07:07 (14)
29	07:48		07:13	06:20	05:46	06:09 (14)	05:43 06:09 (14)
	17:29		19:47	20:25	20:59	49 06:58 (14)	21:14 57 07:06 (14)
30	07:47		07:11	06:18	05:45	06:08 (14)	05:43 06:09 (14)
	17:31		19:48	20:26	21:00	50 06:58 (14)	21:14 58 07:07 (14)
31	07:46		07:09		05:44	06:08 (14)	
	17:32		19:49		21:01	51 06:59 (14)	
Potential sun hours	287	292	369	403	458	464	
Total, worst case				195	701	1715	
Sun reduction				0.61	0.65	0.70	
Oper. time red.				0.98	0.98	0.98	
Wind dir. red.				0.56	0.56	0.56	
Total reduction				0.34	0.36	0.38	
Total, real				65	249	657	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H323 - H323

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:09 (14)	06:11	06:47	07:09 (15)	07:22	07:02	07:41
	21:14	58 07:07 (14)	20:52	20:05	17 07:26 (15)	19:09	17:15	16:47
2	05:44	06:10 (14)	06:12	06:48	07:10 (15)	07:23	07:03	07:42
	21:14	57 07:07 (14)	20:51	20:03	15 07:25 (15)	19:07	17:14	16:47
3	05:45	06:10 (14)	06:13	06:49	07:11 (15)	07:24	07:04	07:43
	21:13	57 07:07 (14)	20:50	20:01	14 07:25 (15)	19:05	17:12	16:46
4	05:45	06:10 (14)	06:14	06:50	07:12 (15)	07:26	07:06	07:44
	21:13	57 07:07 (14)	20:49	19:59	12 07:24 (15)	19:03	17:11	16:46
5	05:46	06:10 (14)	06:15	06:51	07:13 (15)	07:27	07:07	07:45
	21:13	57 07:07 (14)	20:47	19:57	10 07:23 (15)	19:01	17:10	16:46
6	05:47	06:11 (14)	06:17	06:53	07:14 (15)	07:28	07:08	07:46
	21:13	56 07:07 (14)	20:46	19:56	7 07:21 (15)	19:00	17:08	16:45
7	05:47	06:12 (14)	06:18	06:54	07:15 (15)	07:29	07:10	07:47
	21:12	55 07:07 (14)	20:45	19:54	5 07:20 (15)	18:56	17:07	16:45
8	05:48	06:12 (14)	06:19	06:55	07:16 (15)	07:31	07:11	07:48
	21:12	55 07:07 (14)	20:43	19:52	2 07:18 (15)	18:54	17:06	16:45
9	05:49	06:13 (14)	06:20	06:56		07:32	07:12	07:49
	21:12	54 07:07 (14)	20:42	19:50		18:52	17:05	16:45
10	05:50	06:14 (14)	06:21	06:57		07:33	07:14	07:50
	21:11	53 07:07 (14)	20:40	19:48		18:51	17:04	16:45
11	05:50	06:15 (14)	06:22	06:58		07:34	07:15	07:51
	21:11	52 07:07 (14)	20:39	19:46		18:49	17:02	16:45
12	05:51	06:15 (14)	06:23	07:00		07:36	07:16	07:52
	21:10	51 07:06 (14)	20:38	19:44		18:47	17:01	16:45
13	05:52	06:16 (14)	06:25	07:01		07:37	07:18	07:53
	21:10	50 07:06 (14)	20:36	19:43		18:45	17:00	16:45
14	05:53	06:17 (14)	06:26	07:02		07:38	07:19	07:53
	21:09	49 07:06 (14)	20:35	19:41		18:44	16:59	16:45
15	05:54	06:18 (14)	06:27	07:03		07:39	07:21	07:54
	21:08	48 07:06 (14)	20:33	19:39		18:42	16:58	16:46
16	05:55	06:19 (14)	06:28	07:04		07:41	07:22	07:55
	21:08	47 07:06 (14)	20:31	19:37		18:40	16:57	16:46
17	05:56	06:20 (14)	06:29	07:05		07:42	07:23	07:56
	21:07	46 07:06 (14)	20:30	19:35		18:39	16:56	16:46
18	05:56	06:20 (14)	06:30	07:07		07:43	07:24	07:56
	21:06	44 07:04 (14)	20:28	19:33		18:37	16:55	16:47
19	05:57	06:21 (14)	06:32	07:08		07:44	07:26	07:57
	21:05	43 07:04 (14)	20:27	19:31		18:35	16:54	16:47
20	05:58	06:22 (14)	06:33	07:09		07:46	07:27	07:58
	21:05	41 07:03 (14)	20:25	19:29		18:34	16:54	16:47
21	05:59	06:23 (14)	06:34	07:10		07:47	07:28	07:58
	21:04	40 07:03 (14)	20:23	19:28		18:32	16:53	16:48
22	06:00	06:24 (14)	06:35	07:11		07:48	07:30	07:59
	21:03	38 07:02 (14)	20:22	19:26		18:30	16:52	16:48
23	06:01	06:25 (14)	06:36	07:12		07:50	07:31	07:59
	21:02	36 07:01 (14)	20:20	19:24		18:29	16:51	16:49
24	06:02	06:26 (14)	06:37	07:14		07:51	07:32	08:00
	21:01	34 07:00 (14)	20:18	19:22		18:27	16:51	16:49
25	06:03	06:27 (14)	06:39	07:15		07:52	07:33	08:00
	21:00	32 06:59 (14)	20:17	9 07:20 (15)	19:20	18:26	16:50	16:50
26	06:04	06:28 (14)	06:40	07:16		07:54	07:35	08:00
	20:59	30 06:58 (14)	20:15	14 07:22 (15)	19:18	18:24	16:49	16:51
27	06:06	06:29 (14)	06:41	07:17		07:55	07:36	08:01
	20:58	27 06:56 (14)	20:13	17 07:23 (15)	19:16	18:22	16:49	16:51
28	06:07	06:30 (14)	06:42	07:18		07:56	07:37	08:01
	20:57	25 06:55 (14)	20:12	19 07:24 (15)	19:14	18:21	16:48	16:52
29	06:08	06:31 (14)	06:43	07:20		07:58	07:38	08:01
	20:56	21 06:52 (14)	20:10	20 07:25 (15)	19:13	18:19	16:48	16:53
30	06:09	06:32 (14)	06:44	07:21		07:59	07:40	08:01
	20:55	18 06:50 (14)	20:08	19 07:25 (15)	19:11	18:18	16:47	16:54
31	06:10	06:37 (14)	06:46	07:25 (15)		08:00		08:01
	20:54	8 06:45 (14)	20:06	18 07:25 (15)		18:17		16:54
Potential sun hours	471		435	377		341	289	276
Total, worst case	1339		116	82				
Sun reduction	0.76		0.74	0.69				
Oper. time red.	0.98		0.98	0.98				
Wind dir. red.	0.56		0.56	0.56				
Total reduction	0.42		0.41	0.38				
Total, real	557		47	31				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H324 - H324

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	16:53 (14)	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:41
	16:55	17:33	14	17:07 (14)	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09
2	08:02	07:43	16:52 (14)	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:42
	16:56	17:35	17	17:09 (14)	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07
3	08:02	07:42	16:51 (14)	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:43
	16:57	17:36	20	17:11 (14)	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05
4	08:02	07:41	16:51 (14)	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:44
	16:58	17:37	21	17:12 (14)	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03
5	08:02	07:40	16:49 (14)	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:45
	16:59	17:39	24	17:13 (14)	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01
6	08:01	07:38	16:48 (14)	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:46
	17:00	17:40	26	17:15 (14)	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00
7	08:01	07:37	16:49 (14)	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:47
	17:01	17:42	28	17:17 (14)	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56
8	08:01	07:36	16:48 (14)	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:48
	17:02	17:43	30	17:18 (14)	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54
9	08:01	07:35	16:48 (14)	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:49
	17:03	17:45	32	17:20 (14)	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52
10	08:01	07:33	16:48 (14)	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:50
	17:05	17:46	33	17:21 (14)	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51
11	08:00	07:32	16:48 (14)	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:51
	17:06	17:47	33	17:21 (14)	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49
12	08:00	07:30	16:48 (14)	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:35	07:52
	17:07	17:49	33	17:21 (14)	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47
13	08:00	07:29	16:48 (14)	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:53
	17:08	17:50	33	17:21 (14)	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45
14	07:59	07:28	16:49 (14)	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:53
	17:09	17:52	32	17:21 (14)	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44
15	07:59	07:26	16:49 (14)	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:54
	17:10	17:53	31	17:20 (14)	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42
16	07:58	07:25	16:50 (14)	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:55
	17:12	17:54	30	17:20 (14)	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40
17	07:57	07:23	16:50 (14)	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:56
	17:13	17:56	29	17:19 (14)	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38
18	07:57	07:22	16:52 (14)	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:56
	17:14	17:57	26	17:18 (14)	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37
19	07:56	07:20	16:52 (14)	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:57
	17:16	17:59	25	17:17 (14)	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35
20	07:55	07:18	16:54 (14)	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:57
	17:17	18:00	21	17:15 (14)	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33
21	07:55	07:17	16:56 (14)	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:58
	17:18	18:00	17	17:13 (14)	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32
22	07:54	07:15	16:59 (14)	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:59
	17:20	18:01	11	17:10 (14)	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30
23	07:53	07:14	16:52 (14)	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:59
	17:21	18:03		19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	25
24	07:52	07:12	16:54 (14)	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:59
	17:22	18:04		19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	27
25	07:51	07:10	16:56 (14)	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:59
	17:24	18:05		19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	28
26	07:51	07:09	16:54 (14)	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:59
	17:25	18:07		19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	31
27	07:50	07:07	17:01 (14)	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:59
	17:26	18:08		19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	32
28	07:49	07:05	17:03 (14)	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:59
	17:28	18:09		19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	33
29	07:48	17:01 (14)	17:01 (14)	07:13	06:19	05:46	05:43	06:08	06:43	07:20	07:58	07:59
	17:29	2	17:03 (14)	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	32
30	07:47	17:03 (14)	16:57 (14)	07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:59
	17:30	8	17:05 (14)	19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	33
31	07:46	17:05 (14)	16:54 (14)	07:09	05:44	05:44	06:10	06:46	06:46	07:21	07:59	07:59
	17:32	11	17:05 (14)	19:49	21:00	21:00	20:53	20:06	20:06	18:16	33	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	261
Total, worst case	21	566										328
Sun reduction	0.57	0.59										0.63
Oper. time red.	0.98	0.98										0.98
Wind dir. red.	0.56	0.56										0.56
Total reduction	0.31	0.32										0.34
Total, real	7	183										113

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
 3100 DeMers Avenue
 US-GRAND FORKS, ND 58201
 +1 701 775 3000
 Jay Haley / jhaley@eapc.net
 Calculated:
 6/24/2016 3:33 PM/3.0.654

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H325 - H325

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December					
1	08:02	07:44	07:04	16:56 (15)	07:07	06:16	05:44	05:44	06:11	06:47	07:22	18:28 (14)	07:02	16:28 (15)	07:41		
	16:55	17:33	18:11	17:25 (15)	19:50	20:27	21:01	21:14	20:52	20:04	19:09	18:44 (14)	17:15	22	16:50 (15)	16:47	
2	08:02	07:43	07:02	16:58 (15)	07:05	06:15	05:43	05:44	06:12	06:48	07:23	18:27 (14)	07:03	16:30 (15)	07:42		
	16:56	17:35	18:12	17:23 (15)	19:52	20:29	21:02	21:14	20:51	20:03	19:07	18:42 (14)	17:14	19	16:49 (15)	16:46	
3	08:02	07:42	07:00	17:00 (15)	07:04	06:14	05:43	05:45	06:13	06:49	07:24	18:27 (14)	07:04	16:32 (15)	07:43		
	16:57	17:36	18:13	17:22 (15)	19:53	20:30	21:03	21:13	20:50	20:01	19:05	18:39 (14)	17:12	15	16:47 (15)	16:46	
4	08:02	07:41	06:58	17:03 (15)	07:02	06:12	05:42	05:45	06:14	06:50	07:26	18:28 (14)	07:06	16:35 (15)	07:44		
	16:58	17:37	18:15	17:19 (15)	19:54	20:31	21:04	21:13	20:49	19:59	19:03	18:38 (14)	17:11	11	16:46 (15)	16:46	
5	08:02	07:40	06:57	17:07 (15)	07:00	06:11	05:42	05:46	06:15	06:51	07:27	18:28 (14)	07:07	16:45	07:45		
	16:59	17:39	18:16	17:14 (15)	19:55	20:32	21:05	21:13	20:47	19:57	19:01	18:36 (14)	17:10		16:46	16:46	
6	08:01	07:38	17:10 (15)	06:55	17:55 (14)	06:58	06:09	05:41	05:47	06:16	06:53	18:28 (14)	07:08	16:45	07:46		
	17:00	17:40	3	17:13 (15)	18:17	1	17:56 (14)	19:57	20:33	21:05	21:13	20:46	19:55	19:00	6	18:34 (14)	17:08
7	08:01	07:37	17:05 (15)	06:53	17:53 (14)	06:56	06:08	05:41	05:47	06:18	06:54	18:29 (14)	07:10	16:45	07:47		
	17:01	17:42	12	17:17 (15)	18:19	5	17:58 (14)	19:58	20:35	21:06	21:12	20:45	19:54	18:56	3	18:32 (14)	17:07
8	08:01	07:36	17:02 (15)	07:51	18:52 (14)	06:55	06:07	05:41	05:48	06:19	06:55	18:30	17:07	16:45	07:48		
	17:02	17:43	16	17:18 (15)	18:20	7	18:59 (14)	19:59	20:36	21:07	21:12	20:43	19:52	18:54		17:06	16:45
9	08:01	07:35	17:00 (15)	07:50	18:50 (14)	06:53	06:05	05:40	05:49	06:20	06:56	17:39 (15)	07:12	16:45	07:49		
	17:03	17:45	20	17:20 (15)	19:21	10	19:00 (14)	20:00	20:37	21:07	21:12	20:42	19:50	18:52	13	17:52 (15)	17:05
10	08:01	07:33	16:59 (15)	07:48	18:49 (14)	06:51	06:04	05:40	05:49	06:21	06:57	17:35 (15)	07:14	16:45	07:50		
	17:05	17:46	23	17:22 (15)	19:23	12	19:01 (14)	20:01	20:38	21:08	21:11	20:40	19:48	18:51	20	17:55 (15)	17:03
11	08:00	07:32	16:57 (15)	07:46	18:49 (14)	06:49	06:03	05:40	05:50	06:22	06:58	17:33 (15)	07:15	16:45	07:51		
	17:06	17:47	26	17:23 (15)	19:24	13	19:02 (14)	20:03	20:39	21:09	21:11	20:39	19:46	18:49	23	17:56 (15)	17:02
12	08:00	07:30	16:57 (15)	07:44	18:48 (14)	06:47	06:02	05:40	05:51	06:23	07:00	17:31 (15)	07:16	16:45	07:52		
	17:07	17:49	28	17:25 (15)	19:25	15	19:03 (14)	20:04	20:41	21:09	21:10	20:37	19:44	18:47	27	17:58 (15)	17:01
13	07:59	07:29	16:55 (15)	07:42	18:49 (14)	06:46	06:00	05:40	05:52	06:25	07:01	17:29 (15)	07:18	16:45	07:53		
	17:08	17:50	31	17:26 (15)	19:26	17	19:06 (14)	20:05	20:42	21:10	21:09	20:36	19:43	18:45	30	17:59 (15)	17:00
14	07:59	07:28	16:55 (15)	07:41	18:49 (14)	06:44	05:59	05:40	05:53	06:26	07:02	17:27 (15)	07:19	16:45	07:53		
	17:09	17:52	33	17:28 (15)	19:28	18	19:07 (14)	20:06	20:43	21:10	21:09	20:34	19:41	18:44	33	18:00 (15)	16:59
15	07:59	07:26	16:54 (15)	07:39	18:49 (14)	06:42	05:58	05:39	05:54	06:27	07:03	17:27 (15)	07:20	16:45	07:54		
	17:10	17:53	35	17:29 (15)	19:29	17	19:06 (14)	20:08	20:44	21:11	21:08	20:33	19:39	18:42	34	18:01 (15)	16:58
16	07:58	07:25	16:54 (15)	07:37	18:50 (14)	06:41	05:57	05:39	05:55	06:28	07:04	17:26 (15)	07:22	16:45	07:55		
	17:12	17:54	37	17:31 (15)	19:30	15	19:05 (14)	20:09	20:45	21:11	21:08	20:31	19:37	18:40	35	18:01 (15)	16:57
17	07:57	07:23	16:53 (15)	07:35	18:52 (14)	06:39	05:56	05:39	05:55	06:29	07:05	17:24 (15)	07:23	16:45	07:56		
	17:13	17:56	38	17:31 (15)	19:32	10	19:02 (14)	20:10	20:46	21:12	21:07	20:30	19:35	18:38	37	18:01 (15)	16:56
18	07:57	07:22	16:53 (15)	07:33	18:49 (14)	06:37	05:55	05:40	05:56	06:30	07:07	17:24 (15)	07:24	16:45	07:56		
	17:14	17:57	39	17:32 (15)	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	18:02 (15)	16:45	07:56		
19	07:56	07:20	16:53 (15)	07:31	18:49 (14)	06:35	05:54	05:40	05:57	06:32	07:08	17:24 (15)	07:24	16:45	07:57		
	17:16	17:58	39	17:32 (15)	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	18:02 (15)	16:54	16:47	07:57	
20	07:55	07:18	16:52 (15)	07:29	18:49 (14)	06:34	05:53	05:40	05:58	06:33	07:09	17:23 (15)	07:27	16:45	07:57		
	17:17	18:00	39	17:31 (15)	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	18:02 (15)	16:54	16:47	07:57	
21	07:55	07:17	16:53 (15)	07:28	18:49 (14)	06:32	05:52	05:40	05:59	06:34	07:10	17:23 (15)	07:28	16:45	07:58		
	17:18	18:00	39	17:32 (15)	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	18:02 (15)	16:53	16:48	07:58	
22	07:54	07:15	16:52 (15)	07:26	18:49 (14)	06:30	05:51	05:40	06:00	06:35	07:11	17:23 (15)	07:30	16:45	07:59		
	17:19	18:01	39	17:31 (15)	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	18:02 (15)	16:52	16:48	07:59	
23	07:53	07:14	16:52 (15)	07:24	18:49 (14)	06:29	05:50	05:40	06:01	06:36	07:12	17:23 (15)	07:31	16:45	07:59		
	17:21	18:03	39	17:31 (15)	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	18:02 (15)	16:51	16:49	07:59	
24	07:52	07:12	16:53 (15)	07:22	18:49 (14)	06:27	05:49	05:41	06:02	06:37	07:14	17:23 (15)	07:32	16:45	07:59		
	17:22	18:04	38	17:31 (15)	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	18:01 (15)	16:51	16:49	07:59	
25	07:51	07:10	16:53 (15)	07:20	18:49 (14)	06:26	05:48	05:41	06:03	06:39	07:15	17:23 (15)	07:33	16:45	08:00		
	17:24	18:05	37	17:30 (15)	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	18:01 (15)	16:50	16:50	08:00	
26	07:51	07:09	16:53 (15)	07:18	18:49 (14)	06:24	05:48	05:41	06:04	06:40	07:16	17:24 (15)	07:35	16:45	08:00		
	17:25	18:07	36	17:29 (15)	19:43	20:21	20:56	21:14	20:59	20:15	19:18	9	18:44 (14)	18:24	36	18:00 (15)	16:49
27	07:50	07:07	16:55 (15)	07:17	18:49 (14)	06:23	05:47	05:42	06:05	06:41	07:17	18:33 (14)	07:55	16:45	08:01		
	17:26	18:08	33	17:28 (15)	19:44	20:22	20:57	21:14	20:58	20:13	19:16	12	18:45 (14)	18:22	34	17:58 (15)	16:49
28	07:49	07:05	16:56 (15)	07:15	18:49 (14)	06:21	05:46	05:42	06:06	06:42	07:18	18:30 (14)	07:56	16:45	08:01		
	17:28	18:09	31	17:27 (15)	19:45	20:24	20:58	21:14	20:57	20:12	19:14	16	18:46 (14)	18:21	32	17:57 (15)	16:48
29	07:48			07:13	18:49 (14)	06:19	05:45	05:43	06:08	06:43	07:20	18:30 (14)	07:58	16:45	08:01		
	17:29			19:47	20:25	20:59	21:14	20:56	20:10	19:12	18	18:48 (14)	18:19	30	17:55 (15)	16:48	
30	07:47			07:11	18:49 (14)	06:18	05:45	05:43	06:09	06:44	07:21	18:29 (14)	07:59	16:45	08:01		
	17:30			19:48	20:26	21:00	21:14	20:55	20:08	19:11	17	18:46 (14)	18:18	27	17:53 (15)	16:47	
31	07:46			07:09	18:49 (14)	06:17	05:44	05:44	06:10	06:46	07:22	18:30 (14)	07:59	16:45	08:01		
	17:32			19:49	21:00	21:00	21:00	20:53	20:06	19:11	17	18:46 (14)	18:18	25	17:52 (15)	16:54	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276					
Total, worst case		711	239						72	814	67						
Sun reduction		0.59	0.59						0.69	0.63	0.50						
Oper. time red.		0.98	0.98						0.98	0.98	0.98						
Wind dir. red.		0.56	0.56						0.56	0.56	0.56						
Total reduction		0.32	0.32						0.38	0.34	0.27</						

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H326 - H326

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H327 - H327

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H328 - H328

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H330 - H330

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:43 21:01	05:43 21:14	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:34	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:13	07:42 16:46
3	08:01 16:57	07:42 17:36	07:00 18:13	07:03 19:53	06:13 20:30	05:42 21:03	05:44 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:09	07:45 16:45
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:46 21:12	06:16 20:46	06:52 19:55	07:28 18:58	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:18	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:17 20:44	06:53 19:53	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	06:51 18:20	06:54 19:59	06:07 20:36	05:40 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:34 17:44	06:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:04	07:49 16:45
10	08:00 17:04	07:33 17:46	06:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:49 21:11	06:21 20:40	06:57 19:48	07:33 18:50	07:14 17:03	07:50 16:45
11	08:00 17:05	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:09	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:47 20:04	06:01 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:00 20:42	05:39 21:10	05:52 21:09	06:24 20:36	07:00 19:42	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:51	06:40 19:28	06:44 20:06	05:59 20:43	05:39 21:10	05:53 21:09	06:25 20:34	07:02 19:40	07:38 18:43	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	06:38 19:29	06:42 20:07	05:58 20:44	05:39 21:11	05:53 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:45
16	07:58 17:11	07:24 17:54	06:37 19:30	06:40 20:09	05:57 20:45	05:39 21:11	05:54 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:31	06:39 20:10	05:56 20:46	05:39 21:12	05:55 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:39 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	06:31 19:34	06:35 20:12	05:54 20:48	05:39 21:12	05:57 21:05	06:31 20:26	07:07 19:31	07:44 18:35	07:26 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	05:53 20:49	05:40 21:13	05:58 21:04	06:32 20:25	07:09 19:29	07:45 18:33	07:27 16:53	07:57 16:47
21	07:55 17:18	07:17 18:00	06:27 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:47
22	07:54 17:19	07:15 18:01	06:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:02	06:24 19:39	06:29 20:17	05:50 20:53	05:40 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:28	07:31 16:51	07:59 16:48
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	05:49 20:54	05:40 21:13	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:50	07:59 16:49
25	07:51 17:23	07:10 18:05	06:20 19:41	06:25 20:20	05:48 20:55	05:41 21:14	06:03 21:00	06:38 20:17	07:15 19:20	07:52 18:25	07:33 16:50	08:00 16:50
26	07:50 17:25	07:08 18:06	06:18 19:43	06:24 20:21	05:47 20:56	05:41 21:14	06:04 20:59	06:39 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:50
27	07:49 17:26	07:07 18:08	06:16 19:44	06:22 20:22	05:47 20:57	05:42 21:14	06:05 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:36 16:48	08:00 16:51
28	07:48 17:27	07:05 18:09	06:14 19:45	06:21 20:23	05:46 20:57	05:42 21:14	06:06 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:46	06:13 20:25	06:19 20:58	05:45 20:58	05:42 21:14	05:42 20:56	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:47	08:01 16:52
30	07:46 17:30	07:03 19:48	06:11 20:26	06:18 20:59	05:45 21:14	05:43 21:14	06:08 20:54	06:44 20:08	07:21 19:10	07:59 18:18	07:39 16:47	08:01 16:53
31	07:45 17:32	07:02 19:49	06:09 20:27	06:16 21:00	05:44 21:00	06:10 20:53	06:45 20:06	08:00 18:16	08:00 18:16	08:00 18:16	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H331 - H331

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:46	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:13	16:46
3	08:01	07:42	07:00	07:03	06:13	05:42	05:44	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:41	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:06	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:04	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:00	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:25	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:11	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:07	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:32	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:47	05:41	06:04	06:39	07:16	07:53	07:34	08:00
	17:25	18:06	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:48	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H334 - H334

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:13	16:46
3	08:02	07:42	07:00	07:03	06:13	05:42	05:44	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:56	07:00	06:11	05:41	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:06	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:04	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:00	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:25	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:11	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:07	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:32	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:47	05:41	06:04	06:39	07:16	07:53	07:34	08:00
	17:25	18:06	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:48	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H335 - H335

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
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24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H336 - H336

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
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	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H337 - H337

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:47		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H338 - H338

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H339 - H339

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:02	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H340 - H340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H341 - H341

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H342 - H342

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:55	07:45 17:33	07:04 18:11	17:40 (8) 17:49 (8)	07:07 19:50	06:17 19:13 (9)
2	08:02 16:56	07:42 17:35	07:00 18:12	17:38 (8) 17:51 (8)	07:04 19:52	06:14 19:12 (9)
3	08:02 16:57	07:41 17:36	06:59 18:13	17:38 (8) 17:52 (8)	07:02 19:53	06:12 19:12 (9)
4	08:02 16:58	07:41 17:38	06:59 18:15	17:38 (8) 17:53 (8)	07:02 19:54	06:12 19:12 (9)
5	08:02 16:59	07:40 17:39	06:57 18:16	17:37 (8) 17:54 (8)	07:00 19:55	06:11 19:12 (9)
6	08:02 17:00	07:39 17:40	06:55 18:17	17:37 (8) 17:55 (8)	06:58 19:57	06:09 19:12 (9)
7	08:01 17:01	07:37 17:42	06:53 18:19	17:38 (8) 17:58 (8)	06:56 19:58	06:08 19:12 (9)
8	08:01 17:02	07:36 17:43	07:51 18:20	18:38 (8) 18:57 (8)	06:55 19:59	06:07 19:13 (9)
9	08:01 17:03	07:35 17:45	07:50 19:21	18:39 (8) 18:56 (8)	06:53 20:00	06:05 19:13 (9)
10	08:01 17:05	07:33 17:46	07:48 19:23	18:40 (8) 18:54 (8)	06:51 20:02	06:04 19:14 (9)
11	08:00 17:06	07:32 17:47	07:46 19:24	18:41 (8) 18:51 (8)	06:49 20:03	06:03 19:14 (9)
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	06:48 20:04	06:02 19:14 (9)
13	08:00 17:08	07:29 17:50	07:42 19:27	06:46 20:05	06:01 20:42	19:15 (9) 19:54 (9)
14	07:59 17:09	07:28 17:52	07:41 19:28	06:44 20:07	05:59 20:43	19:16 (9) 19:54 (9)
15	07:59 17:10	07:26 17:53	07:39 19:29	06:42 20:08	19:35 (9) 19:43 (9)	05:58 20:44
16	07:58 17:12	07:25 17:54	07:37 19:30	06:41 20:09	19:30 (9) 19:47 (9)	05:57 20:45
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	19:26 (9) 19:48 (9)	05:56 20:46
18	07:57 17:14	07:22 17:57	07:33 19:33	06:37 20:12	19:24 (9) 19:49 (9)	05:55 20:48
19	07:56 17:16	07:20 17:59	07:31 19:34	06:36 20:13	19:22 (9) 19:50 (9)	05:54 20:49
20	07:56 17:17	07:19 18:00	07:30 19:35	06:34 20:14	19:20 (9) 19:51 (9)	05:53 20:50
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	19:19 (9) 19:53 (9)	05:52 20:51
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	19:18 (9) 19:54 (9)	05:51 20:52
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	19:16 (9) 19:54 (9)	05:50 20:53
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	19:16 (9) 19:56 (9)	05:49 20:54
25	07:52 17:24	07:10 18:05	07:20 19:42	06:26 20:20	19:14 (9) 19:57 (9)	05:48 20:55
26	07:51 17:25	07:09 18:07	07:18 19:43	06:24 20:21	19:14 (9) 19:58 (9)	05:48 20:56
27	07:50 17:26	07:07 18:08	07:17 19:44	06:23 20:23	19:13 (9) 19:58 (9)	05:47 20:57
28	07:49 17:28	07:05 18:09	07:15 19:45	06:21 20:24	19:13 (9) 19:59 (9)	05:46 20:58
29	07:48 17:29		07:13 19:47	06:20 20:25	19:12 (9) 19:59 (9)	05:46 20:59
30	07:47 17:30		07:11 19:48	06:18 20:26	19:12 (9) 19:59 (9)	05:45 21:00
31	07:46 17:32		07:09 19:49		05:44 21:01	
Potential sun hours	287	292	369	403	458	465
Total, worst case		8	164	551	884	
Sun reduction		0.59	0.59	0.61	0.65	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.53	0.53	0.62	0.62	
Total reduction		0.31	0.31	0.37	0.40	
Total, real		2	51	205	350	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H342 - H342

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December				
1	05:44	06:11	19:24 (9)	06:47	07:22	07:02	07:41			
	21:14	20:52	42	20:06 (9)	20:05	19:09	17:15	16:47		
2	05:44	06:12	19:24 (9)	06:48	07:23	18:21 (8)	07:03	07:42		
	21:14	20:51	42	20:06 (9)	20:03	19:07	18:29 (8)	17:14	16:46	
3	05:45	06:13	19:23 (9)	06:49	07:24	18:18 (8)	07:04	07:43		
	21:14	20:50	43	20:06 (9)	20:01	19:05	18:31 (8)	17:12	16:46	
4	05:45	06:14	19:24 (9)	06:50	07:26	18:17 (8)	07:06	07:44		
	21:13	20:49	44	20:08 (9)	19:59	19:03	18:33 (8)	17:11	16:46	
5	05:46	06:15	19:23 (9)	06:51	07:27	18:15 (8)	07:07	07:45		
	21:13	20:47	45	20:08 (9)	19:57	19:01	18:34 (8)	17:10	16:46	
6	05:47	06:17	19:22 (9)	06:53	07:28	18:14 (8)	07:08	07:46		
	21:13	20:46	46	20:08 (9)	19:56	19:00	18:34 (8)	17:08	16:45	
7	05:47	06:18	19:22 (9)	06:54	07:29	18:13 (8)	07:10	07:47		
	21:12	20:45	46	20:08 (9)	19:54	18:56	19	18:32 (8)	17:07	16:45
8	05:48	06:19	19:22 (9)	06:55	07:31	18:13 (8)	07:11	07:48		
	21:12	20:43	46	20:08 (9)	19:52	18:54	18	18:31 (8)	17:06	16:45
9	05:49	06:20	19:21 (9)	06:56	07:32	18:12 (8)	07:13	07:49		
	21:12	20:42	47	20:08 (9)	19:50	18:52	17	18:29 (8)	17:05	16:45
10	05:50	06:21	19:21 (9)	06:57	07:33	18:12 (8)	07:14	07:50		
	21:11	20:41	47	20:08 (9)	19:48	18:51	15	18:27 (8)	17:04	16:45
11	05:50	06:22	19:21 (9)	06:58	07:34	18:13 (8)	07:15	07:51		
	21:11	20:39	46	20:07 (9)	19:46	18:49	13	18:26 (8)	17:02	16:45
12	05:51	06:23	19:20 (9)	07:00	07:36	18:13 (8)	07:17	07:52		
	21:10	20:38	47	20:07 (9)	19:44	18:47	11	18:24 (8)	17:01	16:45
13	05:52	06:25	19:20 (9)	07:01	07:37	18:14 (8)	07:18	07:53		
	21:10	20:36	47	20:07 (9)	19:43	18:45	7	18:21 (8)	17:00	16:45
14	05:53	06:26	19:21 (9)	07:02	07:38	18:15 (8)	07:19	07:53		
	21:09	20:35	46	20:07 (9)	19:41	18:44	4	18:19 (8)	16:59	16:45
15	05:54	06:27	19:21 (9)	07:03	07:39		07:21	07:54		
	21:08	20:33	46	20:07 (9)	19:39	18:42		16:58	16:46	
16	05:55	06:28	19:21 (9)	07:04	07:41		07:22	07:55		
	21:08	20:32	45	20:06 (9)	19:37	18:40		16:57	16:46	
17	05:55	06:29	19:21 (9)	07:05	07:42		07:23	07:56		
	21:07	20:30	44	20:05 (9)	19:35	18:38		16:56	16:46	
18	05:56	06:30	19:21 (9)	07:07	07:43		07:25	07:56		
	21:06	20:28	42	20:03 (9)	19:33	18:37		16:55	16:46	
19	05:57	19:40 (9)	06:32	19:22 (9)	07:08	07:44		07:26	07:57	
	21:06	19:50 (9)	20:27	40	20:02 (9)	19:31	18:35	16:54	16:47	
20	05:58	19:38 (9)	06:33	19:22 (9)	07:09	07:46		07:27	07:58	
	21:05	19:53 (9)	20:25	38	20:00 (9)	19:29	18:33	16:54	16:47	
21	05:59	19:36 (9)	06:34	19:23 (9)	07:10	07:47		07:28	07:58	
	21:04	19:55 (9)	20:24	35	19:58 (9)	19:28	18:32	16:53	16:48	
22	06:00	19:34 (9)	06:35	19:23 (9)	07:11	07:48		07:30	07:59	
	21:03	19:56 (9)	20:22	33	19:56 (9)	19:26	18:30	16:52	16:48	
23	06:01	19:33 (9)	06:36	19:25 (9)	07:12	07:50		07:31	07:59	
	21:02	19:58 (9)	20:20	31	19:56 (9)	19:24	18:29	16:51	16:49	
24	06:02	19:32 (9)	06:37	19:26 (9)	07:14	07:51		07:32	08:00	
	21:01	19:59 (9)	20:19	28	19:54 (9)	19:22	18:27	16:51	16:49	
25	06:03	19:31 (9)	06:39	19:27 (9)	07:15	07:52		07:34	08:00	
	21:00	20:00 (9)	20:17	25	19:52 (9)	19:20	18:25	16:50	16:50	
26	06:04	19:30 (9)	06:40	19:29 (9)	07:16	07:54		07:35	08:00	
	20:59	20:01 (9)	20:15	21	19:50 (9)	19:18	18:24	16:49	16:50	
27	06:05	19:29 (9)	06:41	19:32 (9)	07:17	07:55		07:36	08:01	
	20:58	20:02 (9)	20:13	17	19:49 (9)	19:16	18:22	16:49	16:51	
28	06:07	19:28 (9)	06:42	19:37 (9)	07:18	07:56		07:37	08:01	
	20:57	20:03 (9)	20:12	6	19:43 (9)	19:14	18:21	16:48	16:52	
29	06:08	19:27 (9)	06:43		07:20	07:58		07:38	08:01	
	20:56	20:04 (9)	20:10		19:13	18:19		16:48	16:53	
30	06:09	19:26 (9)	06:44		07:21	07:59		07:40	08:01	
	20:55	20:04 (9)	20:08		19:11	18:18		16:47	16:53	
31	06:10	19:25 (9)	06:46			08:00			08:02	
	20:54	20:05 (9)	20:06			18:17			16:54	
Potential sun hours	471	435		377	341		289		276	
Total, worst case	361	1085			180					
Sun reduction	0.76	0.74			0.63					
Oper. time red.	0.98	0.98			0.98					
Wind dir. red.	0.62	0.62			0.53					
Total reduction	0.46	0.45			0.33					
Total, real	167	489			59					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H343 - H343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	07:45	07:04	07:24 (10)	07:07	06:17	05:44	06:11	06:47	07:22	07:46 (10)	07:02	07:41		
	16:56	17:33	18:11	17:49 (6)	19:51	20:28	21:02	21:14	20:52	20:05	19:09	59	18:29 (6)	17:15	16:47
2	08:02	07:43	07:02	07:23 (10)	07:06	06:15	05:43	06:12	06:48	07:23	07:45 (10)	07:03	07:42		
	16:56	17:35	18:12	17:51 (6)	19:52	20:29	21:02	21:14	20:51	20:03	19:07	63	18:30 (6)	17:14	16:47
3	08:02	07:42	07:00	07:21 (10)	07:04	06:14	05:43	06:13	06:49	07:25	07:46 (10)	07:04	07:43		
	16:57	17:36	18:14	17:52 (6)	19:53	20:30	21:03	21:14	20:50	20:01	19:05	64	18:31 (6)	17:12	16:46
4	08:02	07:41	06:59	07:19 (10)	07:02	06:12	05:42	06:14	06:50	07:26	07:47 (10)	07:06	07:44		
	16:58	17:38	18:15	17:53 (6)	19:54	20:31	21:04	21:13	20:49	19:59	19:03	65	18:31 (6)	17:11	16:46
5	08:02	07:40	06:57	07:17 (10)	07:00	06:11	05:42	06:16	06:52	07:27	07:48 (10)	07:07	07:45		
	16:59	17:39	18:16	17:54 (6)	19:55	20:32	21:05	21:13	20:47	19:57	19:02	64	18:31 (6)	17:10	16:46
6	08:02	07:39	06:55	07:16 (10)	06:58	06:10	05:41	06:17	06:53	07:28	07:49 (10)	07:09	07:46		
	17:00	17:40	18:18	17:55 (6)	19:57	20:34	21:06	21:13	20:46	19:56	19:00	64	18:31 (6)	17:09	16:46
7	08:02	07:37	06:53	07:14 (10)	06:57	06:08	05:41	06:18	06:54	07:29	07:51 (10)	07:10	07:47		
	17:01	17:42	18:19	17:55 (6)	19:58	20:35	21:06	21:13	20:45	19:54	18:56	61	18:31 (6)	17:07	16:45
8	08:01	07:36	07:52	08:12 (10)	06:55	06:07	05:41	06:19	06:55	07:31	07:52 (10)	07:11	07:48		
	17:02	17:43	18:20	18:54 (6)	19:59	20:36	21:07	21:12	20:43	19:52	18:54	60	18:31 (6)	17:06	16:45
9	08:01	07:35	07:50	08:10 (10)	06:53	06:06	05:41	06:20	06:56	07:32	07:53 (10)	07:13	07:49		
	17:04	17:45	19:21	18:53 (6)	20:00	20:37	21:08	21:12	20:42	19:50	18:53	57	18:29 (6)	17:05	16:45
10	08:01	07:33	07:48	08:08 (10)	06:51	06:04	05:40	06:21	06:57	07:33	07:54 (10)	07:14	07:50		
	17:05	17:46	19:23	18:52 (6)	20:02	20:38	21:08	21:11	20:41	19:48	18:51	52	18:27 (6)	17:04	16:45
11	08:00	07:32	07:46	08:07 (10)	06:49	06:03	05:40	06:22	06:59	07:34	07:56 (10)	07:15	07:51		
	17:06	17:48	19:24	18:52 (6)	20:03	20:40	21:09	21:11	20:39	19:46	18:49	48	18:26 (6)	17:03	16:45
12	08:00	07:31	07:44	08:07 (10)	06:48	06:02	05:40	06:24	07:00	07:36	07:57 (10)	07:17	07:52		
	17:07	17:49	19:25	18:51 (6)	20:04	20:41	21:10	21:10	20:38	19:45	18:47	43	18:24 (6)	17:01	16:45
13	08:00	07:29	07:43	08:08 (10)	06:46	06:01	05:40	06:25	07:01	07:37	07:58 (10)	07:18	07:53		
	17:08	17:50	19:27	18:49 (6)	20:05	20:42	21:10	21:10	20:36	19:43	18:45	37	18:21 (6)	17:00	16:45
14	07:59	07:28	07:41	08:08 (10)	06:44	06:59	05:40	06:26	07:02	07:38	08:00 (10)	07:19	07:54		
	17:09	17:52	19:28	18:47 (6)	20:07	20:43	21:11	21:09	20:35	19:41	18:44	31	18:20 (6)	16:59	16:46
15	07:59	07:26	07:39	08:09 (10)	06:42	06:58	05:40	06:27	07:03	07:39	08:01 (10)	07:21	07:54		
	17:11	17:53	19:29	18:45 (6)	20:08	20:44	21:11	21:08	20:33	19:39	18:42	23	18:18 (6)	16:58	16:46
16	07:58	07:25	07:37	08:10 (10)	06:41	06:57	05:40	06:28	07:04	07:41	07:59 (10)	07:22	07:55		
	17:12	17:55	3	17:31 (11)	19:30	38	18:42 (6)	20:09	20:45	21:12	21:08	20:32	19:37	16:46	16:46
17	07:58	07:23	07:35	08:11 (10)	06:39	06:56	05:40	06:29	07:06	07:42	07:57 (10)	07:23	07:56		
	17:13	17:56	6	17:32 (11)	19:32	25	18:37 (6)	20:10	20:46	21:12	21:07	20:30	19:35	16:46	16:46
18	07:57	07:22	07:33	08:15 (10)	06:37	06:55	05:40	06:31	07:07	07:43	07:58 (10)	07:25	07:56		
	17:14	17:57	9	17:34 (11)	19:33	12	08:27 (10)	20:12	20:48	21:12	21:06	20:28	19:33	16:47	16:47
19	07:56	07:20	07:32	08:22 (10)	06:36	06:54	05:40	06:32	07:08	07:45	07:59 (10)	07:26	07:57		
	17:16	17:59	11	17:35 (11)	19:34		20:13	20:49	21:13	21:06	20:27	19:31	16:47	16:47	16:47
20	07:56	07:19	07:30	08:24 (10)	06:34	06:53	05:40	06:33	07:09	07:46	07:59 (10)	07:27	07:58		
	17:17	18:00	13	17:37 (11)	19:36		20:14	20:50	21:13	21:05	20:25	19:30	16:47	16:47	16:47
21	07:55	07:17	07:28	08:25 (10)	06:32	06:52	05:40	06:34	07:10	07:47	07:59 (10)	07:29	07:58		
	17:18	18:00	14	17:38 (11)	19:37		20:15	20:51	21:13	21:04	20:24	19:28	16:48	16:48	16:48
22	07:54	07:15	07:26	08:26 (10)	06:31	06:51	05:40	06:35	07:11	07:48	07:59 (10)	07:30	07:59		
	17:20	18:01	16	17:39 (11)	19:38		20:17	20:52	21:13	21:03	20:22	19:26	16:48	16:48	16:48
23	07:53	07:14	07:24	08:27 (10)	06:29	06:50	05:41	06:36	07:13	07:50	07:59 (10)	07:31	07:59		
	17:21	18:03	17	17:41 (6)	19:39		20:18	20:53	21:14	21:02	20:20	19:24	16:49	16:49	16:49
24	07:53	07:12	07:22	08:28 (10)	06:27	06:49	05:41	06:38	07:14	07:51	07:59 (10)	07:32	08:00		
	17:22	18:04	18	17:42 (6)	19:41		20:19	20:54	21:14	21:01	20:19	19:22	16:49	16:49	16:49
25	07:52	07:11	07:20	08:29 (10)	06:26	06:49	05:41	06:39	07:15	07:52	07:59 (10)	07:34	08:00		
	17:24	18:06	18	17:43 (6)	19:42		20:20	20:55	21:14	21:00	20:17	19:20	16:50	16:50	16:50
26	07:51	07:09	07:19	08:30 (10)	06:24	06:48	05:41	06:40	07:16	07:54	07:59 (10)	07:35	08:00		
	17:25	18:07	21	17:45 (6)	19:43		20:21	20:56	21:14	20:59	20:15	19:18	16:51	16:51	16:51
27	07:50	07:07	07:17	08:31 (10)	06:23	06:47	05:42	06:41	07:17	07:55	07:59 (10)	07:36	08:01		
	17:26	18:08	26	17:46 (6)	19:44		20:23	20:57	21:14	20:58	20:13	19:16	16:51	16:51	16:51
28	07:49	07:06	07:15	08:32 (10)	06:21	06:46	05:42	06:42	07:19	07:51	07:59 (10)	07:37	08:01		
	17:28	18:10	35	17:48 (6)	19:46		20:24	20:58	21:14	20:57	20:12	19:15	16:52	16:52	16:52
29	07:48		07:13	08:33 (10)	06:20	06:46	05:43	06:43	07:20	07:54	07:59 (10)	07:38	08:01		
	17:29		19:47	08:34 (10)	06:19	06:45	05:43	06:44	07:21	07:55	07:59 (10)	07:39	08:02		
30	07:47		07:11	08:35 (10)	06:18	06:45	05:43	06:45	07:22	07:56	07:59 (10)	07:40	08:02		
	17:31		19:48	08:36 (10)	06:17	06:44	05:43	06:46	07:23	07:57	07:59 (10)	07:41	08:03		
31	07:46		07:09	08:37 (10)	06:16	06:43	05:43	06:47	07:24	07:58	07:59 (10)	07:42	08:03		
	17:32		19:49	08:38 (10)	06:15	06:42	05:43	06:48	07:25	07:59	07:59 (10)	07:43	08:04		
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276			
Total, worst case		207	915						207	930					
Sun reduction		0.59	0.59						0.69	0.63					
Oper. time red.		0.98	0.98						0.98	0.98					
Wind dir. red.		0.55	0.58						0.59	0.57					
Total reduction		0.32	0.33						0.40	0.35					
Total, real		66	304						82	325					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H345 - H345

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:02	07:45	08:17 (6)	07:04	07:08	07:28 (7)	06:17	05:44	20:19 (2)	
	16:56	17:33	21 08:38 (6)	18:11	19:51	49 19:17 (4)	20:28	21:02	16 20:35 (2)	
2	08:02	07:44	08:17 (6)	07:02	07:06	07:26 (7)	06:15	05:43	20:20 (2)	
	16:56	17:35	19 08:36 (6)	18:12	19:52	49 19:15 (4)	20:29	21:03	17 20:37 (2)	
3	08:02	07:42	08:19 (6)	07:00	07:04	07:24 (7)	06:14	05:43	20:19 (2)	
	16:57	17:36	16 08:35 (6)	18:14	19:53	48 19:14 (4)	20:30	21:03	18 20:37 (2)	
4	08:02	07:41	08:22 (6)	06:59	07:02	07:22 (7)	06:12	05:42	20:20 (2)	
	16:58	17:38	11 08:33 (6)	18:15	19:54	47 19:12 (4)	20:31	21:04	18 20:38 (2)	
5	08:02	07:40		06:57	07:00	07:20 (7)	06:11	05:42	20:19 (2)	
	16:59	1 08:26 (6)	17:39	18:16	19:56	46 19:11 (4)	20:33	21:05	19 20:38 (2)	
6	08:02	07:39		06:55	06:58	07:20 (7)	06:10	05:42	20:20 (2)	
	17:00	2 08:28 (6)	17:41	18:18	19:57	42 19:09 (4)	20:34	21:06	19 20:39 (2)	
7	08:02	07:37		06:53	06:57	07:20 (7)	06:08	05:41	20:20 (2)	
	17:01	3 08:29 (6)	17:42	18:19	19:58	36 19:07 (4)	20:35	21:06	20 20:40 (2)	
8	08:01	07:36		07:52	06:55	07:21 (7)	06:07	05:41	20:21 (2)	
	17:03	5 08:30 (6)	17:43	18:20	19:59	24 19:02 (4)	20:36	21:07	20 20:41 (2)	
9	08:01	07:35		07:50	06:53	07:23 (7)	06:06	05:41	20:20 (2)	
	17:04	6 08:31 (6)	17:45	19:22	20:01	12 07:35 (7)	20:37	21:08	21 20:41 (2)	
10	08:01	07:33		07:48	06:51	07:27 (7)	06:04	05:40	20:20 (2)	
	17:05	8 08:33 (6)	17:46	19:23	20:02	3 07:30 (7)	20:39	21:08	22 20:42 (2)	
11	08:01	07:32		07:46	06:50		06:03	05:40	20:21 (2)	
	17:06	9 08:33 (6)	17:48	19:24	20:03		20:40	21:09	21 20:42 (2)	
12	08:00	07:31		07:44	06:48		06:02	05:40	20:21 (2)	
	17:07	10 08:34 (6)	17:49	19:25	20:04		20:41	21:10	22 20:43 (2)	
13	08:00	07:29		07:43	06:46		06:01	05:40	20:21 (2)	
	17:08	12 08:35 (6)	17:50	19:27	20:05		20:42	21:10	22 20:43 (2)	
14	07:59	07:28		07:41	06:44		06:00	05:40	20:22 (2)	
	17:09	13 08:36 (6)	17:52	19:28	20:07		20:43	21:11	22 20:44 (2)	
15	07:59	07:26		07:39	06:43		05:58	05:40	20:22 (2)	
	17:11	14 08:36 (6)	17:53	19:29	20:08		20:44	21:11	22 20:44 (2)	
16	07:58	07:25		07:37	06:41		05:57	05:40	20:22 (2)	
	17:12	16 08:37 (6)	17:55	19:31	20:09		20:45	21:12	23 20:45 (2)	
17	07:58	07:23		07:35	06:39		05:56	05:40	20:22 (2)	
	17:13	17 08:38 (6)	17:56	19:32	20:10		20:47	21:12	23 20:45 (2)	
18	07:57	07:22		07:33	19:00 (4)	06:37	05:55	05:40	20:23 (2)	
	17:14	18 08:38 (6)	17:57	19:33	10 19:10 (4)	20:12	20:48	21:12	22 20:45 (2)	
19	07:56	07:20		07:32	18:56 (4)	06:36	05:54	05:40	20:23 (2)	
	17:16	20 08:39 (6)	17:59	19:34	17 19:13 (4)	20:13	20:49	21:13	22 20:45 (2)	
20	07:56	07:19		07:30	18:53 (4)	06:34	05:53	05:40	20:23 (2)	
	17:17	21 08:40 (6)	18:00	19:36	21 19:14 (4)	20:14	20:50	21:13	23 20:46 (2)	
21	07:55	07:17		07:28	18:51 (4)	06:32	05:52	05:40	20:23 (2)	
	17:18	22 08:40 (6)	18:00	19:37	25 19:16 (4)	20:15	20:51	21:13	23 20:46 (2)	
22	07:54	07:16		07:26	18:50 (4)	06:31	05:51	20:24 (2)	05:40	20:24 (2)
	17:20	23 08:40 (6)	18:01	19:38	27 19:17 (4)	20:17	20:52	3 20:27 (2)	21:14	23 20:47 (2)
23	07:53	07:14		07:24	18:48 (4)	06:29	05:50	20:23 (2)	05:41	20:24 (2)
	17:21	24 08:40 (6)	18:03	19:39	29 19:17 (4)	20:18	20:53	5 20:28 (2)	21:14	23 20:47 (2)
24	07:53	07:12		07:22	18:47 (4)	06:27	05:50	20:21 (2)	05:41	20:24 (2)
	17:22	25 08:40 (6)	18:04	19:41	31 19:18 (4)	20:19	20:54	7 20:28 (2)	21:14	22 20:46 (2)
25	07:52	07:11		07:20	18:47 (4)	06:26	05:49	20:21 (2)	05:41	20:25 (2)
	17:24	26 08:40 (6)	18:06	19:42	32 19:19 (4)	20:20	20:55	8 20:29 (2)	21:14	22 20:47 (2)
26	07:51	07:09		07:19	07:39 (7)	06:24	05:48	20:21 (2)	05:42	20:24 (2)
	17:25	27 08:40 (6)	18:07	19:43	36 19:19 (4)	20:22	20:56	10 20:31 (2)	21:14	23 20:47 (2)
27	07:50	07:07		07:17	07:37 (7)	06:23	05:47	20:20 (2)	05:42	20:24 (2)
	17:27	28 08:40 (6)	18:08	19:44	40 19:19 (4)	20:23	20:57	11 20:31 (2)	21:14	23 20:47 (2)
28	07:49	07:06		07:15	07:35 (7)	06:21	05:46	20:19 (2)	05:42	20:25 (2)
	17:28	28 08:40 (6)	18:10	19:46	42 19:18 (4)	20:24	20:58	13 20:32 (2)	21:14	22 20:47 (2)
29	07:48			07:13	07:33 (7)	06:20	05:46	20:20 (2)	05:43	20:25 (2)
	17:29	27 08:40 (6)		19:47	46 19:18 (4)	20:25	20:59	13 20:33 (2)	21:14	22 20:47 (2)
30	07:47			07:11	07:31 (7)	06:18	05:45	20:19 (2)	05:43	20:25 (2)
	17:31	26 08:40 (6)		19:48	47 19:17 (4)	20:26	21:00	15 20:34 (2)	21:14	22 20:47 (2)
31	07:46			07:09	07:29 (7)		05:44	20:20 (2)		
	17:32	24 08:39 (6)		19:49	48 19:16 (4)		21:01	15 20:35 (2)		
Potential sun hours	287	292	369	403	458			465		
Total, worst case	455	67	451	356	100			637		
Sun reduction	0.57	0.59	0.59	0.61	0.65			0.70		
Oper. time red.	0.98	0.98	0.98	0.98	0.98			0.98		
Wind dir. red.	0.69	0.69	0.58	0.58	0.68			0.68		
Total reduction	0.39	0.40	0.34	0.35	0.43			0.46		
Total, real	175	27	152	124	43			295		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H345 - H345

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December					
1	05:44	20:25 (2)	06:11	06:47	07:22	07:02	07:41	08:06 (6)			
	21:14	21	20:46 (2)	20:53	20:05	19:09	17:15	9 08:15 (6)			
2	05:44	20:26 (2)	06:12	06:48	07:26 (7)	07:23	07:03	07:42	08:07 (6)		
	21:14	21	20:47 (2)	20:51	20:03	3 07:29 (7)	19:07	17:14	16:47	8 08:15 (6)	
3	05:45	20:25 (2)	06:13	06:49	07:21 (7)	07:25	07:05	07:43	08:09 (6)		
	21:14	21	20:46 (2)	20:50	20:01	12 07:33 (7)	19:05	17:13	16:46	6 08:15 (6)	
4	05:46	20:26 (2)	06:14	06:50	07:18 (7)	07:26	07:06	07:44	08:10 (6)		
	21:14	20	20:46 (2)	20:49	19:59	24 18:59 (4)	19:03	17:11	16:46	5 08:15 (6)	
5	05:46	20:25 (2)	06:16	06:52	07:17 (7)	07:27	07:07	07:45	08:11 (6)		
	21:13	20	20:45 (2)	20:48	19:58	34 19:02 (4)	19:02	17:10	16:46	4 08:15 (6)	
6	05:47	20:26 (2)	06:17	06:53	07:15 (7)	07:28	07:09	07:46	08:12 (6)		
	21:13	19	20:45 (2)	20:46	19:56	41 19:04 (4)	19:00	17:09	16:46	2 08:14 (6)	
7	05:48	20:26 (2)	06:18	06:54	07:15 (7)	07:30	07:10	07:52 (6)	07:47	08:13 (6)	
	21:13	20	20:46 (2)	20:45	19:54	46 19:06 (4)	18:56	17:07	11 08:03 (6)	16:45	1 08:14 (6)
8	05:48	20:26 (2)	06:19	06:55	07:17 (7)	07:31	07:11	07:50 (6)	07:48		
	21:12	18	20:44 (2)	20:43	19:52	48 19:08 (4)	18:54	17:06	16 08:06 (6)	16:45	
9	05:49	20:26 (2)	06:20	06:56	07:18 (7)	07:32	07:13	07:48 (6)	07:49		
	21:12	18	20:44 (2)	20:42	19:50	48 19:08 (4)	18:53	17:05	19 08:07 (6)	16:45	
10	05:50	20:27 (2)	06:21	06:57	07:19 (7)	07:33	07:14	07:48 (6)	07:50		
	21:11	17	20:44 (2)	20:41	19:48	49 19:08 (4)	18:51	17:04	21 08:09 (6)	16:45	
11	05:50	20:27 (2)	06:22	06:59	07:20 (7)	07:34	07:15	07:46 (6)	07:51		
	21:11	17	20:44 (2)	20:39	19:47	49 19:09 (4)	18:49	17:03	24 08:10 (6)	16:45	
12	05:51	20:27 (2)	06:24	07:00	07:21 (7)	07:36	07:17	07:46 (6)	07:52		
	21:10	16	20:43 (2)	20:38	19:45	49 19:09 (4)	18:47	17:01	26 08:12 (6)	16:45	
13	05:52	20:27 (2)	06:25	07:01	07:22 (7)	07:37	07:18	07:45 (6)	07:53		
	21:10	15	20:42 (2)	20:36	19:43	47 19:08 (4)	18:46	17:00	27 08:12 (6)	16:45	
14	05:53	20:28 (2)	06:26	07:02	07:23 (7)	07:38	07:19	07:44 (6)	07:54		
	21:09	14	20:42 (2)	20:35	19:41	45 19:08 (4)	18:44	16:59	28 08:12 (6)	16:46	
15	05:54	20:29 (2)	06:27	07:03	07:25 (7)	07:40	07:21	07:45 (6)	07:54		
	21:09	13	20:42 (2)	20:33	19:39	44 19:09 (4)	18:42	16:58	28 08:13 (6)	16:46	
16	05:55	20:29 (2)	06:28	07:04	07:26 (7)	07:41	07:22	07:46 (6)	07:55		
	21:08	12	20:41 (2)	20:32	19:37	40 19:08 (4)	18:40	16:57	27 08:13 (6)	16:46	
17	05:56	20:30 (2)	06:29	07:06	07:27 (7)	07:42	07:23	07:48 (6)	07:56		
	21:07	11	20:41 (2)	20:30	19:35	37 19:07 (4)	18:39	16:56	26 08:14 (6)	16:46	
18	05:57	20:31 (2)	06:31	07:07	18:34 (4)	07:43	07:25	07:49 (6)	07:57		
	21:06	9	20:40 (2)	20:29	19:33	32 19:06 (4)	18:37	16:55	25 08:14 (6)	16:47	
19	05:58	20:32 (2)	06:32	07:08	18:34 (4)	07:45	07:26	07:50 (6)	07:57		
	21:06	7	20:39 (2)	20:27	19:32	31 19:05 (4)	18:35	16:55	24 08:14 (6)	16:47	
20	05:58	20:31 (2)	06:33	07:09	18:34 (4)	07:46	07:27	07:52 (6)	07:58		
	21:05	7	20:38 (2)	20:25	19:30	30 19:04 (4)	18:34	16:54	23 08:15 (6)	16:47	
21	05:59	20:33 (2)	06:34	07:10	18:35 (4)	07:47	07:29	07:53 (6)	07:58		
	21:04	4	20:37 (2)	20:24	19:28	28 19:03 (4)	18:32	16:53	22 08:15 (6)	16:48	
22	06:00	20:34 (2)	06:35	07:11	18:36 (4)	07:49	07:30	07:55 (6)	07:59		
	21:03	2	20:36 (2)	20:22	19:26	25 19:01 (4)	18:30	16:52	21 08:16 (6)	16:48	
23	06:01		06:36	07:13	18:37 (4)	07:50	07:31	07:56 (6)	07:59		
	21:02		20:20	19:24	22 18:59 (4)	18:29	16:51	20 08:16 (6)	16:49		
24	06:02		06:38	07:14	18:39 (4)	07:51	07:32	07:57 (6)	08:00		
	21:01		20:19	19:22	18 18:57 (4)	18:27	16:51	18 08:15 (6)	16:49		
25	06:04		06:39	07:15	18:41 (4)	07:52	07:34	07:59 (6)	08:00		
	21:00		20:17	19:20	13 18:54 (4)	18:26	16:50	17 08:16 (6)	16:50		
26	06:05		06:40	07:16		07:54	07:35	08:00 (6)	08:01		
	20:59		20:15	19:18		18:24	16:49	16 08:16 (6)	16:51		
27	06:06		06:41	07:17		07:55	07:36	08:01 (6)	08:01		
	20:58		20:14	19:16		18:23	16:49	14 08:15 (6)	16:51		
28	06:07		06:42	07:19		07:56	07:37	08:03 (6)	08:01		
	20:57		20:12	19:15		18:21	16:48	13 08:16 (6)	16:52		
29	06:08		06:43	07:20		07:58	07:39	08:04 (6)	08:01		
	20:56		20:10	19:13		18:20	16:48	12 08:16 (6)	16:53		
30	06:09		06:45	07:21		07:59	07:40	08:05 (6)	08:02		
	20:55		20:08	19:11		18:18	16:47	10 08:15 (6)	16:54		
31	06:10		06:46			08:01		08:02			
	20:54		20:07			18:17		16:54			
Potential sun hours	471	435	377	341	289	276					
Total, worst case	322		815		488	35					
Sun reduction	0.76		0.69		0.50	0.49					
Oper. time red.	0.98		0.98		0.98	0.98					
Wind dir. red.	0.68		0.58		0.69	0.69					
Total reduction	0.50		0.39		0.34	0.33					
Total, real	162		322		165	12					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H346 - H346

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:33	07:04 18:11	07:25 (7) 07:35 (7)	07:08 19:51	06:17 20:28
2	08:02 16:56	07:44 17:35	07:02 18:12	07:23 (7) 07:35 (7)	07:06 19:52	42 20:02 (2)
3	08:02 16:57	07:42 17:36	07:00 18:14	07:21 (7) 07:35 (7)	07:04 19:53	44 20:01 (2)
4	08:02 16:58	07:41 17:38	17:02 (4) 17:07 (4)	06:59 18:15	07:19 (7) 07:35 (7)	45 20:01 (2)
5	08:02 16:59	07:40 17:39	16:58 (4) 17:11 (4)	06:57 18:16	07:17 (7) 07:34 (7)	44 20:00 (2)
6	08:02 17:00	07:39 17:41	16:55 (4) 17:13 (4)	06:55 18:18	07:16 (7) 07:35 (7)	45 20:33
7	08:02 17:01	07:37 17:42	16:53 (4) 17:15 (4)	06:53 18:19	07:14 (7) 07:34 (7)	44 20:34
8	08:01 17:03	07:36 17:43	16:52 (4) 17:17 (4)	06:52 18:20	08:12 (7) 08:33 (7)	43 20:35
9	08:01 17:04	07:35 17:45	16:51 (4) 17:18 (4)	06:50 19:22	08:13 (7) 08:31 (7)	41 19:55 (2)
10	08:01 17:05	07:34 17:46	16:50 (4) 17:19 (4)	07:48 19:23	08:14 (7) 08:29 (7)	38 19:53 (2)
11	08:01 17:06	07:32 17:48	16:49 (4) 17:19 (4)	07:46 19:24	08:16 (7) 08:28 (7)	31 19:49 (2)
12	08:00 17:07	07:31 17:49	16:49 (4) 17:21 (4)	07:44 19:25	06:48 20:04	28 20:40
13	08:00 17:08	07:29 17:50	16:49 (4) 17:22 (4)	07:43 19:27	06:46 20:06	26 20:41
14	07:59 17:09	07:28 17:52	16:48 (4) 17:21 (4)	07:41 19:28	06:44 20:07	25 20:42
15	07:59 17:11	07:26 17:53	16:48 (4) 17:22 (4)	07:39 19:29	06:43 20:08	24 20:43
16	07:58 17:12	07:25 17:55	16:48 (4) 17:22 (4)	07:37 19:31	06:41 20:09	22 20:44
17	07:58 17:13	07:23 17:56	16:47 (4) 17:21 (4)	07:35 19:32	06:39 20:10	20 20:45
18	07:57 17:14	07:22 17:57	16:48 (4) 17:22 (4)	07:33 19:33	06:37 20:12	18 20:47
19	07:56 17:16	07:20 17:59	16:48 (4) 17:21 (4)	07:32 19:34	06:36 20:13	15 20:48
20	07:56 17:17	07:19 18:00	16:49 (4) 17:21 (4)	07:30 19:36	06:34 20:14	11 20:49
21	07:55 17:18	07:17 18:00	16:49 (4) 17:20 (4)	07:28 19:37	06:32 20:15	7 19:51 (2)
22	07:54 17:20	07:16 18:01	16:49 (4) 17:19 (4)	07:26 19:38	06:31 20:17	5 19:42 (2)
23	07:54 17:21	07:14 18:03	16:50 (4) 17:19 (4)	07:24 19:39	06:29 20:18	15 19:53 (2)
24	07:53 17:22	07:12 18:04	16:51 (4) 17:17 (4)	07:22 19:41	06:27 20:19	11 19:55 (2)
25	07:52 17:24	07:11 18:06	16:52 (4) 17:16 (4)	07:20 19:42	06:26 20:20	18 19:56 (2)
26	07:51 17:25	07:09 18:07	07:30 (7) 17:14 (4)	07:19 19:43	06:24 20:22	21 19:58 (2)
27	07:50 17:27	07:07 18:08	07:28 (7) 17:12 (4)	07:17 19:44	06:23 20:23	26 20:00 (2)
28	07:49 17:28	07:06 18:10	07:26 (7) 17:07 (4)	07:15 19:46	06:21 20:24	31 20:01 (2)
29	07:48 17:29		07:13 19:47	07:13 19:47	06:20 20:25	36 20:02 (2)
30	07:47 17:31		07:11 19:48	07:11 19:48	06:18 20:26	38 20:02 (2)
31	07:46 17:32		07:09 19:49	07:09 19:49	05:44 21:01	41 20:02 (2)
Potential sun hours	287	292	369	403	458	465
Total, worst case		665	174	261	611	
Sun reduction		0.59	0.59	0.61	0.65	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.56	0.62	0.61	0.57	
Total reduction		0.32	0.36	0.36	0.36	
Total, real		215	63	95	222	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H346 - H346

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:36 (5)	06:47	07:22	07:02
	21:14	20:53	27 07:03 (5)	20:05	19:09	29 16:20 (4)
2	05:44	06:12	06:37 (5)	06:48	07:23	07:03
	21:14	20:51	27 07:04 (5)	20:03	19:07	8 08:04 (7)
3	05:45	06:13	06:37 (5)	06:49	07:25	07:05
	21:14	20:50	35 20:02 (2)	20:01	19:05	14 08:07 (7)
4	05:46	06:14	06:38 (5)	06:50	07:26	07:06
	21:14	20:49	40 20:05 (2)	19:59	19:04	17 08:08 (7)
5	05:46	06:16	06:39 (5)	06:52	07:27	07:07
	21:13	20:48	42 20:06 (2)	19:58	19:02	20 08:09 (7)
6	05:47	06:17	06:40 (5)	06:53	07:28	07:09
	21:13	20:46	43 20:07 (2)	19:56	19:00	20 08:09 (7)
7	05:47	06:18	06:41 (5)	06:54	07:30	07:10
	21:13	20:45	44 20:08 (2)	19:54	18:56	19 08:10 (7)
8	05:48	06:19	06:42 (5)	06:55	07:31	07:11
	21:12	20:44	45 20:09 (2)	19:52	18:54	18 08:10 (7)
9	05:49	06:20	06:43 (5)	06:56	07:32	07:13
	21:12	20:42	45 20:09 (2)	19:50	18:53	17 08:10 (7)
10	05:50	06:21	06:44 (5)	06:57	07:33	07:14
	21:11	20:41	45 20:10 (2)	19:48	18:51	15 08:09 (7)
11	05:50	06:22	06:45 (5)	06:59	07:35	07:15
	21:11	20:39	44 20:10 (2)	19:47	18:49	13 08:09 (7)
12	05:51	06:24	06:46 (5)	07:00	07:36	07:17
	21:10	20:38	43 20:10 (2)	19:45	18:47	11 08:08 (7)
13	05:52	06:25	06:48 (5)	07:01	07:37	07:18
	21:10	20:36	41 20:11 (2)	19:43	18:46	9 08:07 (7)
14	05:53	06:26	06:49 (5)	07:02	07:38	08:00 (7)
	21:09	20:35	39 20:10 (2)	19:41	18:44	17 17:42 (4)
15	05:54	06:27	06:50 (5)	07:03	07:40	08:01 (7)
	21:09	20:33	34 20:08 (2)	19:39	18:42	21 17:45 (4)
16	05:55	06:28	06:51 (5)	07:04	07:41	17:25 (4)
	21:08	20:32	31 20:07 (2)	19:37	18:40	22 17:47 (4)
17	05:56	06:29	06:52 (5)	07:06	07:42	17:24 (4)
	21:07	20:30	25 20:05 (2)	19:35	18:39	25 17:49 (4)
18	05:57	06:31	19:43 (2)	07:07	07:43	17:22 (4)
	21:06	20:29	20 20:03 (2)	19:33	18:37	27 17:49 (4)
19	05:58	06:32	19:44 (2)	07:08	07:45	17:20 (4)
	21:06	20:27	18 20:02 (2)	19:32	18:35	30 17:50 (4)
20	05:58	06:33	19:44 (2)	07:09	07:46	17:20 (4)
	21:05	20:25	16 20:00 (2)	19:30	18:34	31 17:51 (4)
21	05:59	06:34	19:45 (2)	07:10	07:47	17:19 (4)
	21:04	20:24	13 19:58 (2)	19:28	18:32	32 17:51 (4)
22	06:00	06:35	19:47 (2)	07:11	07:49	17:18 (4)
	21:03	20:22	10 19:57 (2)	19:26	18:30	33 17:51 (4)
23	06:01	06:36	19:49 (2)	07:13	07:50	17:18 (4)
	21:02	20:20	7 19:56 (2)	19:24	18:29	34 17:52 (4)
24	06:02	06:38	19:53 (2)	07:14	07:51	17:17 (4)
	21:01	9 06:54 (5)	20:19	19:22	18:27	34 17:51 (4)
25	06:04	06:43 (5)	19:54 (2)	07:15	07:53	17:18 (4)
	21:00	13 06:56 (5)	20:17	19:20	18:26	34 17:52 (4)
26	06:05	06:42 (5)	06:40	07:16	07:54	17:17 (4)
	20:59	16 06:58 (5)	20:15	19:18	18:24	34 17:51 (4)
27	06:06	06:40 (5)	06:41	07:17	07:55	17:17 (4)
	20:58	19 06:59 (5)	20:14	19:17	18:23	34 17:51 (4)
28	06:07	06:39 (5)	06:42	07:19	07:56	17:18 (4)
	20:57	21 07:00 (5)	20:12	19:15	18:21	33 17:51 (4)
29	06:08	06:39 (5)	06:43	07:20	07:58	17:18 (4)
	20:56	22 07:01 (5)	20:10	19:13	18:20	32 17:50 (4)
30	06:09	06:38 (5)	06:45	07:21	07:59	17:19 (4)
	20:55	24 07:02 (5)	20:08	19:11	18:18	31 17:50 (4)
31	06:10	06:37 (5)	06:46		08:01	17:19 (4)
	20:54	25 07:02 (5)	20:07		18:17	30 17:49 (4)
Potential sun hours	471	435	377	341	289	276
Total, worst case	149	735		715	135	
Sun reduction	0.76	0.74		0.63	0.50	
Oper. time red.	0.98	0.98		0.98	0.98	
Wind dir. red.	0.55	0.59		0.58	0.56	
Total reduction	0.41	0.43		0.35	0.27	
Total, real	61	314		254	37	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H347 - H347

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	07:45	07:04	07:36 (6)	07:08	06:17
	16:56	17:33	18:11	19:51	20:28	19:10 (4)
2	08:02	07:44	07:02	07:06	06:15	19:54 (4)
	16:57	17:35	18:12	19:52	20:29	19:09 (4)
3	08:02	07:42	07:00	07:04	06:14	19:54 (4)
	16:57	17:36	18:14	19:53	20:30	19:09 (4)
4	08:02	07:41	06:59	07:02	06:12	19:54 (4)
	16:58	17:38	18:15	19:54	20:31	19:09 (4)
5	08:02	07:40	06:57	07:00	06:11	19:54 (4)
	16:59	17:39	18:16	19:56	20:33	19:09 (4)
6	08:02	07:39	06:55	06:58	06:10	19:54 (4)
	17:00	17:41	18:18	19:57	20:34	19:09 (4)
7	08:02	07:37	06:53	06:57	06:08	19:54 (4)
	17:01	17:42	18:19	19:58	20:35	19:09 (4)
8	08:01	07:36	07:52	06:55	06:07	19:54 (4)
	17:03	17:43	18:20	19:59	20:36	19:09 (4)
9	08:01	07:35	07:50	06:53	06:06	19:54 (4)
	17:04	17:45	19:22	20:01	20:37	19:09 (4)
10	08:01	07:34	07:48	06:51	06:04	19:54 (4)
	17:05	17:46	19:23	20:02	20:39	19:10 (4)
11	08:01	07:32	07:46	06:50	07:10 (7)	19:52 (4)
	17:06	17:48	19:24	20:03	20:40	19:10 (4)
12	08:00	07:31	07:44	06:48	07:08 (7)	19:52 (4)
	17:07	17:49	19:25	20:04	20:41	19:11 (4)
13	08:00	07:29	07:43	06:46	07:06 (7)	19:52 (4)
	17:08	17:50	19:27	20:06	20:42	19:12 (4)
14	07:59	07:28	07:49 (6)	07:41	06:44	19:51 (4)
	17:09	17:52	19:28	20:07	20:43	19:11 (4)
15	07:59	07:26	07:48 (6)	07:39	06:43	19:50 (4)
	17:11	17:53	19:29	20:08	20:44	19:12 (4)
16	07:58	07:25	07:46 (6)	07:37	06:41	19:49 (4)
	17:12	17:55	19:31	20:09	20:45	19:13 (4)
17	07:58	07:23	07:44 (6)	07:35	06:39	19:49 (4)
	17:13	17:56	19:32	20:10	20:46	19:14 (4)
18	07:57	07:22	07:43 (6)	07:33	06:37	19:48 (4)
	17:14	17:57	19:33	20:12	20:48	19:15 (4)
19	07:56	07:20	07:41 (6)	07:32	06:36	19:47 (4)
	17:16	17:59	19:34	20:13	20:49	19:16 (4)
20	07:56	07:19	07:40 (6)	07:30	06:34	19:46 (4)
	17:17	18:00	19:36	20:14	20:50	19:18 (4)
21	07:55	07:17	07:38 (6)	07:28	06:32	19:46 (4)
	17:18	18:00	19:37	20:15	20:51	19:19 (4)
22	07:54	07:16	07:36 (6)	07:26	06:31	19:45 (4)
	17:20	18:02	19:38	20:17	20:52	19:20 (4)
23	07:53	07:14	07:35 (6)	07:24	06:29	19:44 (4)
	17:21	18:03	19:39	20:18	20:53	19:21 (4)
24	07:53	07:12	07:33 (6)	07:22	06:27	19:42 (4)
	17:22	18:04	19:41	20:19	20:54	19:23 (4)
25	07:52	07:11	07:31 (6)	07:21	06:26	19:40 (4)
	17:24	18:06	19:42	20:20	20:55	19:25 (4)
26	07:51	07:09	07:31 (6)	07:19	06:24	19:38 (4)
	17:25	18:07	19:43	20:22	20:56	19:28 (4)
27	07:50	07:07	07:32 (6)	07:17	06:23	19:36 (4)
	17:27	18:08	19:44	20:23	20:57	19:36 (4)
28	07:49	07:06	07:33 (6)	07:15	06:21	19:36 (4)
	17:28	18:10	19:46	20:24	20:58	19:36 (4)
29	07:48		07:13	07:13	06:20	19:36 (4)
	17:29		19:47	20:25	20:59	19:36 (4)
30	07:47		07:11	07:11	06:18	19:36 (4)
	17:31		19:48	20:26	21:00	19:36 (4)
31	07:46		07:09	07:09	05:44	19:36 (4)
	17:32		19:49	21:01	21:01	19:36 (4)
Potential sun hours	287	292	369	403	458	465
Total, worst case		224	11	610	911	
Sun reduction		0.59	0.59	0.61	0.65	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.64	0.64	0.61	0.62	
Total reduction		0.37	0.37	0.36	0.40	
Total, real		82	4	221	361	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H347 - H347

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December				
1	05:44	06:11	19:21 (4)	06:47	07:09 (7)	07:22				
	21:14	20:53	41	20:02 (4)	20:05	5	07:14 (7)	19:09	17:15	16:47
2	05:44	06:12	19:21 (4)	06:48	07:10 (7)	07:23	07:10 (7)	19:07	17:14	16:47
	21:14	20:51	42	20:03 (4)	20:03	2	07:12 (7)	19:07	17:14	16:47
3	05:45	06:13	19:20 (4)	06:49	07:25	07:25		19:05	17:13	16:46
	21:14	20:50	43	20:03 (4)	20:01			19:05	17:13	16:46
4	05:46	06:14	19:20 (4)	06:50	07:26	07:26		19:04	17:11	16:46
	21:14	20:49	43	20:03 (4)	19:59			19:04	17:11	16:46
5	05:46	06:16	19:19 (4)	06:52	07:27	07:27		19:02	17:10	16:46
	21:13	20:48	44	20:03 (4)	19:58			19:02	17:10	16:46
6	05:47	06:17	19:19 (4)	06:53	07:28	07:28		19:00	17:09	16:46
	21:13	20:46	44	20:03 (4)	19:56			19:00	17:09	16:46
7	05:48	06:18	19:19 (4)	06:54	07:30	07:30		18:56	17:07	16:45
	21:13	20:45	44	20:03 (4)	19:54			18:56	17:07	16:45
8	05:48	06:19	19:18 (4)	06:55	07:31	07:31		18:54	17:06	16:45
	21:12	20:44	45	20:03 (4)	19:52			18:54	17:06	16:45
9	05:49	06:20	19:18 (4)	06:56	07:32	07:32		18:53	17:05	16:45
	21:12	20:42	45	20:03 (4)	19:50			18:53	17:05	16:45
10	05:50	06:21	19:18 (4)	06:57	07:33	07:33		18:51	17:04	16:45
	21:11	20:41	45	20:03 (4)	19:48			18:51	17:04	16:45
11	05:51	06:22	19:17 (4)	06:59	07:35	07:35		18:49	17:03	16:45
	21:11	20:39	45	20:02 (4)	19:47			18:49	17:03	16:45
12	05:51	06:24	19:17 (4)	07:00	07:36		08:12 (6)	18:47	17:02	16:45
	21:10	20:38	45	20:02 (4)	19:45		5	18:47	17:01	16:45
13	05:52	06:25	19:18 (4)	07:01	07:37		08:08 (6)	18:46	17:00	16:45
	21:10	20:36	44	20:02 (4)	19:43		13	18:46	17:00	16:45
14	05:53	06:26	19:18 (4)	07:02	07:38		08:06 (6)	18:44	17:00	16:45
	21:09	20:35	44	20:02 (4)	19:41		17	18:44	16:59	16:46
15	05:54	06:27	19:18 (4)	07:03	07:40		08:04 (6)	18:42	16:58	16:46
	21:09	20:33	43	20:01 (4)	19:39		20	18:42	16:58	16:46
16	05:55	06:28	19:19 (4)	07:04	07:41		08:02 (6)	18:40	16:57	16:46
	21:08	20:32	41	20:00 (4)	19:37		23	18:40	16:57	16:46
17	05:56	19:41 (4)	06:29	19:19 (4)	07:06	07:42	08:04 (6)	18:39	16:56	16:46
	21:07	1	19:42 (4)	20:30	40	19:59 (4)	19:35	18:39	16:56	16:46
18	05:57	19:36 (4)	06:31	19:19 (4)	07:07	07:43	08:05 (6)	18:37	16:55	16:47
	21:06	11	19:47 (4)	20:29	39	19:58 (4)	19:33	18:37	16:55	16:47
19	05:58	19:34 (4)	06:32	19:20 (4)	07:08	07:45	08:06 (6)	18:35	16:55	16:47
	21:06	16	19:50 (4)	20:27	37	19:57 (4)	19:32	18:35	16:55	16:47
20	05:59	19:31 (4)	06:33	19:20 (4)	07:09	07:46	08:08 (6)	18:34	16:54	16:47
	21:05	20	19:51 (4)	20:25	36	19:56 (4)	19:30	18:34	16:54	16:47
21	05:59	19:30 (4)	06:34	07:04 (7)	07:10	07:47	08:09 (6)	18:32	16:53	16:48
	21:04	22	19:52 (4)	20:24	41	19:55 (4)	19:28	18:32	16:53	16:48
22	06:00	19:29 (4)	06:35	07:01 (7)	07:11	07:49	08:10 (6)	18:30	16:52	16:48
	21:03	25	19:54 (4)	20:22	44	19:54 (4)	19:26	18:30	16:52	16:48
23	06:01	19:28 (4)	06:36	06:59 (7)	07:13	07:50	08:12 (6)	18:29	16:51	16:49
	21:02	27	19:55 (4)	20:20	44	19:52 (4)	19:24	18:29	16:51	16:49
24	06:03	19:27 (4)	06:38	07:00 (7)	07:14	07:51	08:13 (6)	18:27	16:51	16:49
	21:01	29	19:56 (4)	20:19	39	19:49 (4)	19:22	18:27	16:51	16:49
25	06:04	19:26 (4)	06:39	07:01 (7)	07:15	07:53	08:15 (6)	18:26	16:50	16:50
	21:00	31	19:57 (4)	20:17	33	19:46 (4)	19:20	18:26	16:50	16:50
26	06:05	19:25 (4)	06:40	07:02 (7)	07:16	07:54	08:16 (6)	18:24	16:50	16:51
	20:59	33	19:58 (4)	20:15	22	19:41 (4)	19:18	18:24	16:50	16:51
27	06:06	19:24 (4)	06:41	07:03 (7)	07:17	07:55	08:17 (6)	18:23	16:49	16:51
	20:58	35	19:59 (4)	20:14	13	07:16 (7)	19:17	18:23	16:49	16:51
28	06:07	19:23 (4)	06:42	07:04 (7)	07:19	07:56	08:19 (6)	18:21	16:48	16:52
	20:57	36	19:59 (4)	20:12	12	07:16 (7)	19:15	18:21	16:48	16:52
29	06:08	19:23 (4)	06:43	07:05 (7)	07:20	07:58	08:20 (6)	18:20	16:48	16:53
	20:56	37	20:00 (4)	20:10	11	07:16 (7)	19:13	18:20	16:48	16:53
30	06:09	19:22 (4)	06:45	07:07 (7)	07:21	07:59	08:21 (6)	18:18	16:47	16:54
	20:55	39	20:01 (4)	20:08	9	07:16 (7)	19:11	18:18	16:47	16:54
31	06:10	19:21 (4)	06:46	07:08 (7)		08:01		18:17	16:54	16:54
	20:54	40	20:01 (4)	20:07	7	07:15 (7)		18:17	16:54	16:54
Potential sun hours	471	435	377	341	289	276				
Total, worst case	402	1125	7	239						
Sun reduction	0.76	0.74	0.69	0.63						
Oper. time red.	0.98	0.98	0.98	0.98						
Wind dir. red.	0.62	0.61	0.55	0.64						
Total reduction	0.46	0.44	0.37	0.39						
Total, real	186	501	3	94						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H348 - H348

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H349 - H349

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:09 (1)	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	3 07:12 (1)	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48		07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:52	20:03		19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49		07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01		19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51		07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00		19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52		07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58		19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53		07:28	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56		19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54		07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54		18:56	17:07	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55		07:31	07:11	07:49
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52		18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56		07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50		18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:40	05:50	06:21	06:58		07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49		18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59		07:35	07:16	07:51
	17:06	17:48	19:24	20:03	3 07:13 (1)	20:40	21:09	21:11	19:47		18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	07:08 (1)	06:02	05:40	05:51	06:39		07:36	07:17	07:52
	17:07	17:49	19:26	20:04	6 07:14 (1)	20:41	21:10	21:11	19:45		18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	07:06 (1)	06:01	05:40	05:52	06:25		07:37	07:18	07:53
	17:08	17:51	19:27	20:06	8 07:14 (1)	20:42	21:10	21:10	19:43		18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	07:05 (1)	06:00	05:40	05:53	06:26		07:38	07:20	07:54
	17:10	17:52	19:28	20:07	10 07:15 (1)	20:43	21:11	21:09	19:41		18:44	16:59	16:46
15	07:59	07:27	07:39	06:43	07:03 (1)	05:59	05:40	05:54	06:27		07:40	07:21	07:55
	17:11	17:53	19:29	20:08	12 07:15 (1)	20:44	21:11	21:09	19:39		18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	07:01 (1)	05:57	05:40	05:55	06:28		07:41	07:22	07:55
	17:12	17:55	19:31	20:09	13 07:14 (1)	20:46	21:12	21:08	19:37		18:41	16:57	16:46
17	07:58	07:24	07:35	06:39	07:00 (1)	05:56	05:40	05:56	06:30		07:42	07:24	07:56
	17:13	17:56	19:32	20:11	15 07:15 (1)	20:47	21:12	21:07	19:35		18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	06:58 (1)	05:55	05:40	05:57	06:31		07:44	07:25	07:57
	17:15	17:58	19:33	20:12	16 07:14 (1)	20:48	21:13	21:07	19:34		18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	06:56 (1)	05:54	05:40	05:58	06:32		07:45	07:26	07:57
	17:16	17:59	19:35	20:13	17 07:13 (1)	20:49	21:13	21:06	19:32		18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	06:55 (1)	05:53	05:40	05:59	06:33		07:46	07:28	07:58
	17:17	18:00	19:36	20:14	17 07:12 (1)	20:50	21:13	21:05	19:30	9 07:13 (1)	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	06:56 (1)	05:52	05:40	06:00	06:34		07:47	07:29	07:59
	17:19	18:00	19:37	20:16	15 07:11 (1)	20:51	21:14	21:04	19:28	13 07:15 (1)	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	06:56 (1)	05:51	05:41	06:01	06:35		07:49	07:30	07:59
	17:20	18:02	19:38	20:17	13 07:09 (1)	20:52	21:14	21:03	19:26	16 07:16 (1)	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	06:59 (1)	05:51	05:41	06:02	06:37		07:50	07:31	08:00
	17:21	18:03	19:40	20:18	7 07:06 (1)	20:53	21:14	21:02	19:24	17 07:16 (1)	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:00 (1)		07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	17 07:17 (1)	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:01 (1)		07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	16 07:17 (1)	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:02 (1)		07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	15 07:17 (1)	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:03 (1)		07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	13 07:16 (1)	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:04 (1)		07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	12 07:16 (1)	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:06 (1)		07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	10 07:16 (1)	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:07 (1)		07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	8 07:15 (1)	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46	07:08 (1)		08:01		08:02
	17:32		19:50		21:01		20:54	20:07	6 07:14 (1)		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276	
Total, worst case				152				152	3				
Sun reduction				0.61				0.74	0.69				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.55				0.55	0.55				
Total reduction				0.33				0.40	0.37				
Total, real				50				60	1				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H351 - H351

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	15:49 (1)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	15:38 (1)	
	16:56	27 16:16 (1)	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47	20 15:58 (1)	
2	08:02	15:48 (1)	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	15:38 (1)	
	16:56	28 16:16 (1)	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47	21 15:59 (1)	
3	08:02	15:49 (1)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43	15:38 (1)	
	16:57	27 16:16 (1)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46	23 16:01 (1)	
4	08:02	15:50 (1)	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44	15:38 (1)	
	16:58	26 16:16 (1)	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46	24 16:02 (1)	
5	08:02	15:51 (1)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	15:38 (1)	
	16:59	26 16:17 (1)	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46	24 16:02 (1)	
6	08:02	15:52 (1)	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46	15:38 (1)	
	17:00	25 16:17 (1)	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46	25 16:03 (1)	
7	08:02	15:53 (1)	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47	15:38 (1)	
	17:01	24 16:17 (1)	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45	26 16:04 (1)	
8	08:02	15:53 (1)	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	15:38 (1)	
	17:03	24 16:17 (1)	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45	26 16:04 (1)	
9	08:01	15:54 (1)	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49	15:38 (1)	
	17:04	23 16:17 (1)	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45	27 16:05 (1)	
10	08:01	15:56 (1)	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50	15:39 (1)	
	17:05	21 16:17 (1)	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:48	18:51	17:04	16:45	27 16:06 (1)	
11	08:01	15:56 (1)	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51	15:39 (1)	
	17:06	20 16:16 (1)	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45	27 16:06 (1)	
12	08:00	15:58 (1)	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52	15:39 (1)	
	17:07	18 16:16 (1)	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45	28 16:07 (1)	
13	08:00	15:58 (1)	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53	15:39 (1)	
	17:08	17 16:15 (1)	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45	28 16:07 (1)	
14	07:59	16:01 (1)	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54	15:39 (1)	
	17:09	14 16:15 (1)	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46	29 16:08 (1)	
15	07:59	16:02 (1)	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55	15:40 (1)	
	17:11	12 16:14 (1)	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46	28 16:08 (1)	
16	07:58	16:06 (1)	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55	15:41 (1)	
	17:12	6 16:12 (1)	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46	28 16:09 (1)	
17	07:58		07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56	15:40 (1)	
	17:13		17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46	29 16:09 (1)	
18	07:57		07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57	15:41 (1)	
	17:14		17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:47	29 16:10 (1)	
19	07:57		07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57	09:38 (3)	
	17:16		17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47	33 16:11 (1)	
20	07:56		07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58	09:37 (3)	
	17:17		18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47	35 16:11 (1)	
21	07:55		07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58	09:38 (3)	
	17:18		18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48	35 16:12 (1)	
22	07:54		07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:12	07:49	07:30	07:59	09:38 (3)	
	17:20		18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48	35 16:12 (1)	
23	07:54		07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59	09:39 (3)	
	17:21		18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49	35 16:13 (1)	
24	07:53		07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00	09:39 (3)	
	17:22		18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49	35 16:13 (1)	
25	07:52		07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00	09:41 (3)	
	17:24		18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	32 16:13 (1)	
26	07:51		07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01	15:45 (1)	
	17:25		18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	6 15:50 (1)	16:51	29 16:14 (1)
27	07:50		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	15:41 (1)	08:01	15:46 (1)
	17:27		18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	12 15:53 (1)	16:51	28 16:14 (1)
28	07:49		07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	15:41 (1)	08:01	15:46 (1)
	17:28		18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	14 15:55 (1)	16:52	28 16:14 (1)
29	07:48			07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	15:40 (1)	08:01	15:46 (1)
	17:29			19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16 15:56 (1)	16:53	29 16:15 (1)
30	07:47			07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	15:39 (1)	08:02	15:47 (1)
	17:31			19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	19 15:58 (1)	16:54	28 16:15 (1)
31	07:46			07:09	05:44	05:44	06:10	06:46	07:22	08:01			08:02	15:47 (1)	
	17:32			19:49	21:01	21:01	20:54	20:07			18:17		16:54	28 16:15 (1)	
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276			
Total, worst case	338										67		879		
Sun reduction	0.57										0.50		0.49		
Oper. time red.	0.98										0.98		0.98		
Wind dir. red.	0.55										0.55		0.56		
Total reduction	0.31										0.27		0.27		
Total, real	104										18		235		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H352 - H352

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H353 - H353

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H354 - H354

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:33	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09		16:32 (3) 16:47
2	08:02 16:56	07:44 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:43 21:03	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	19	16:33 (3) 16:47
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	16	16:33 (3) 16:47
4	08:02 16:58	07:41 17:38	17:11 (3) 17:12 (3)	06:59 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:14	06:14 20:49	06:50 19:59	14	16:35 (3) 16:46
5	08:02 16:59	07:40 17:39	17:08 (3) 17:14 (3)	06:57 18:16	07:00 19:56	06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:48	06:52 19:58	11	16:36 (3) 16:46
6	08:02 17:00	07:39 17:40	17:06 (3) 17:15 (3)	06:55 18:18	06:58 19:57	06:10 20:34	05:41 21:06	05:47 21:13	06:17 20:46	06:53 19:56	9	16:38 (3) 16:46
7	08:02 17:01	07:37 17:42	17:05 (3) 17:17 (3)	06:53 18:19	06:57 19:58	06:08 20:35	05:41 21:06	05:47 21:13	06:18 20:45	06:54 19:54	6	16:41 (3) 16:45
8	08:01 17:02	07:36 17:43	17:04 (3) 17:19 (3)	06:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	1	16:42 (3) 16:45
9	08:01 17:04	07:35 17:45	17:03 (3) 17:20 (3)	06:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:56 19:50	7	16:43 (3) 16:45
10	08:01 17:05	07:33 17:46	17:02 (3) 17:22 (3)	06:48 19:23	06:51 20:02	06:04 20:39	05:40 21:08	05:50 21:11	06:21 20:41	06:57 19:48	10	16:44 (3) 16:45
11	08:01 17:06	07:32 17:48	17:01 (3) 17:22 (3)	06:49 19:24	06:49 20:03	06:03 20:40	05:40 21:09	05:50 21:11	06:22 20:39	06:59 19:47	11	16:45 (3) 16:45
12	08:00 17:07	07:31 17:49	17:02 (3) 17:24 (3)	06:48 19:25	06:48 20:04	06:02 20:41	05:40 21:10	05:51 21:10	06:24 20:38	07:00 19:45	12	16:46 (3) 16:45
13	08:00 17:08	07:29 17:50	17:02 (3) 17:26 (3)	06:43 19:27	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:10	06:25 19:43	07:01 18:46	13	16:47 (3) 16:45
14	07:59 17:09	07:28 17:52	17:01 (3) 17:27 (3)	06:41 19:28	06:44 20:07	05:59 20:43	05:40 21:11	05:53 21:09	06:26 19:41	07:02 18:44	14	16:48 (3) 16:46
15	07:59 17:11	07:26 17:53	17:01 (3) 17:28 (3)	06:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:03 19:39	15	16:49 (3) 16:46
16	07:58 17:12	07:25 17:55	17:01 (3) 17:29 (3)	06:37 19:31	06:41 20:09	05:57 20:45	05:40 21:12	05:55 21:08	06:28 19:37	07:04 18:40	16	16:50 (3) 16:46
17	07:58 17:13	07:23 17:56	17:01 (3) 17:28 (3)	06:35 19:32	06:39 20:10	05:56 20:47	05:40 21:12	05:56 21:07	06:29 20:30	07:06 19:35	17	16:51 (3) 16:46
18	07:57 17:14	07:22 17:57	17:02 (3) 17:28 (3)	06:33 19:33	06:37 20:12	05:55 20:48	05:40 21:12	05:57 21:06	06:31 20:29	07:07 19:33	6	16:52 (3) 16:47
19	07:56 17:16	07:20 17:59	17:03 (3) 17:27 (3)	06:32 19:34	06:36 20:13	05:54 20:49	05:40 21:13	05:57 21:06	06:32 20:27	07:08 19:32	13	16:53 (3) 16:47
20	07:56 17:17	07:19 18:00	17:04 (3) 17:27 (3)	06:30 19:36	06:34 20:14	05:53 20:50	05:40 21:13	05:58 21:05	06:33 20:25	07:09 19:30	18	16:54 (3) 16:47
21	07:55 17:18	07:17 18:00	17:05 (3) 17:25 (3)	06:32 19:37	06:32 20:15	05:52 20:51	05:40 21:13	05:59 21:04	06:34 20:24	07:10 19:28	19	16:55 (3) 16:48
22	07:54 17:20	07:16 18:01	17:06 (3) 17:23 (3)	06:31 19:38	06:31 20:17	05:51 20:52	05:40 21:14	06:00 21:03	06:35 20:22	07:11 19:26	20	16:56 (3) 16:48
23	07:53 17:21	07:14 18:03	17:09 (3) 17:21 (3)	06:29 19:39	06:29 20:18	05:50 20:53	05:41 21:14	06:01 21:02	06:36 20:20	07:13 19:24	24	16:57 (3) 16:49
24	07:53 17:22	07:12 18:04	17:12 (3) 17:22 (3)	06:27 19:41	06:27 20:19	05:49 20:54	05:41 21:14	06:02 21:01	06:38 20:19	07:14 19:22	25	16:58 (3) 16:49
25	07:52 17:24	07:11 18:06	17:11 (3) 17:24 (3)	06:26 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:03 21:00	06:39 20:17	07:15 19:20	26	16:59 (3) 16:50
26	07:51 17:25	07:09 18:07	17:10 (3) 17:25 (3)	06:24 19:43	06:24 20:22	05:48 20:56	05:41 21:14	06:05 20:59	06:40 20:15	07:16 19:18	27	16:59 (3) 16:51
27	07:50 17:26	07:07 18:08	17:11 (3) 17:26 (3)	06:23 19:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:17 19:16	28	16:59 (3) 16:51
28	07:49 17:28	07:06 18:10	17:12 (3) 17:28 (3)	06:21 19:46	06:21 20:24	05:46 20:58	05:42 21:14	06:07 20:57	06:42 20:12	07:19 19:15	28	16:59 (3) 16:48
29	07:48 17:29	07:05 18:09	17:13 (3) 17:29 (3)	06:20 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	29	16:59 (3) 16:53
30	07:47 17:31	07:04 18:08	17:14 (3) 17:31 (3)	06:18 19:48	06:18 20:26	05:45 21:00	05:43 21:14	06:09 20:55	06:45 20:08	07:21 19:11	30	16:59 (3) 16:54
31	07:46 17:32	07:03 18:07	17:15 (3) 17:32 (3)	06:17 19:49	06:17 20:01	05:44 21:01	05:40 20:54	06:10 20:54	06:46 20:07	08:01 18:17	23	16:59 (3) 16:54
Potential sun hours	287	292	377	403	458	465	471	435	377	341	289	276
Total, worst case			377								310	76
Sun reduction			0.59								0.63	0.50
Oper. time red.			0.98								0.98	0.98
Wind dir. red.			0.56								0.56	0.56
Total reduction			0.32								0.34	0.27
Total, real			121								106	21

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H355 - H355

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	07:02 17:15	07:41 16:47
2	08:02 16:56	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:47
3	08:02 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:02 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:26 19:03	07:06 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:05	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:57	06:10 20:33	05:42 21:05	05:47 21:13	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:35	05:41 21:06	05:47 21:12	06:18 20:45	06:54 19:54	07:29 18:56	07:10 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:31 18:54	07:11 17:06	07:48 16:45
9	08:01 17:04	07:35 17:45	07:50 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:47	17:17 (42) 17:23 (42)	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:09	06:22 21:11	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	17:15 (42) 17:25 (42)	07:44 19:25	06:48 20:04	06:02 20:41	05:40 21:09	06:24 21:10	07:00 19:44	07:35 18:47	07:16 17:01	07:52 16:45
13	07:59 17:08	07:29 17:50	17:13 (42) 17:26 (42)	07:42 19:27	06:46 20:05	06:01 20:42	05:40 21:10	06:25 21:09	07:01 19:43	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:28 17:52	17:12 (42) 17:28 (42)	07:41 19:28	06:44 20:06	05:59 20:43	05:40 21:10	06:26 21:09	07:02 19:41	07:38 18:44	07:19 17:49 (42)	07:53 16:59
15	07:58 17:11	07:26 17:53	17:11 (42) 17:29 (42)	07:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	06:27 20:33	07:03 19:39	07:39 18:42	07:20 18:01 (42)	07:54 16:58
16	07:58 17:12	07:25 17:54	17:10 (42) 17:31 (42)	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	06:28 20:31	07:04 19:37	07:41 18:40	07:22 17:44 (42)	07:55 16:57
17	07:57 17:13	07:23 17:56	17:10 (42) 17:32 (42)	07:35 19:32	06:39 20:10	05:56 20:46	05:40 21:12	06:29 21:07	07:05 19:35	07:42 18:39	07:23 18:03 (42)	07:55 16:56
18	07:57 17:14	07:22 17:57	17:10 (42) 17:34 (42)	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	06:30 21:06	07:07 19:33	07:43 18:37	07:24 18:05 (42)	07:56 16:47
19	07:56 17:16	07:20 17:59	17:09 (42) 17:35 (42)	07:31 19:34	06:36 20:13	05:54 20:48	05:40 21:12	06:32 21:05	07:08 19:31	07:44 18:35	07:26 17:41 (42)	07:57 16:47
20	07:55 17:17	07:18 18:00	17:09 (42) 17:35 (42)	07:30 19:35	06:34 20:14	05:53 20:49	05:40 21:13	06:33 21:04	07:09 19:29	07:46 18:34	07:27 17:40 (42)	07:57 16:47
21	07:55 17:18	07:17 18:00	17:09 (42) 17:35 (42)	07:28 19:37	06:32 20:15	05:52 20:51	05:40 21:13	06:34 21:04	07:10 19:28	07:47 18:32	07:28 18:06 (42)	07:58 16:48
22	07:54 17:20	07:15 18:01	17:09 (42) 17:34 (42)	07:26 19:38	06:31 20:16	05:51 20:52	05:40 21:13	06:35 21:03	07:11 19:26	07:48 18:30	07:30 18:05 (42)	07:58 16:48
23	07:53 17:21	07:14 18:03	17:09 (42) 17:33 (42)	07:24 19:39	06:29 20:18	05:50 20:53	05:41 21:13	06:36 21:02	07:12 19:24	07:50 18:29	07:31 17:39 (42)	07:59 16:49
24	07:52 17:22	07:12 18:04	17:11 (42) 17:33 (42)	07:22 19:40	06:27 20:19	05:49 20:54	05:41 21:14	06:37 21:01	07:14 19:22	07:51 18:27	07:32 18:03 (42)	07:59 16:49
25	07:51 17:24	07:10 18:05	17:11 (42) 17:31 (42)	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:39 21:00	07:15 19:20	07:52 18:26	07:33 17:39 (42)	08:00 16:50
26	07:51 17:25	07:09 18:07	17:12 (42) 17:30 (42)	07:18 19:43	06:24 20:21	05:48 20:56	05:42 21:14	06:40 20:59	07:16 19:15	07:54 18:24	07:35 18:00 (42)	08:00 16:51
27	07:50 17:26	07:07 18:08	17:15 (42) 17:28 (42)	07:17 19:44	06:23 20:22	05:47 20:57	05:42 21:14	06:06 20:58	07:17 19:16	07:55 18:22	07:36 17:58 (42)	08:00 16:51
28	07:49 17:28	07:05 18:09	17:19 (42) 17:24 (42)	07:15 19:45	06:21 20:24	05:46 20:58	05:42 21:14	06:07 20:57	07:18 19:14	07:56 18:21	07:37 17:43 (42)	08:01 16:52
29	07:48 17:29	07:48 18:09	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	07:57 18:19	07:38 17:55 (42)	08:01 16:53
30	07:47 17:31	07:47 18:09	07:11 19:48	06:18 20:26	05:45 20:59	05:43 21:14	06:09 20:55	06:44 20:08	07:21 19:11	07:59 18:18	07:39 17:53 (42)	08:01 16:54
31	07:45 17:32	07:45 18:09	07:09 19:49	05:44 21:00	05:44 21:00	06:10 20:53	06:46 20:06	08:00 18:17	07:47 17:52 (42)	08:00 18:17	08:01 17:47 (42)	08:01 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case		335								336		
Sun reduction		0.59								0.63		
Oper. time red.		0.98								0.98		
Wind dir. red.		0.55								0.55		
Total reduction		0.32								0.34		
Total, real		107								115		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H356 - H356

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:39	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:54	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H357 - H357

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:35	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:31	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:39	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:30	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:56
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	07:59
	17:23	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H358 - H358

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09		16:33 (50) 16:47
2	08:01 16:56	07:42 17:35	17:08 (50) 18:12	07:02 19:51	07:05 20:28	06:15 21:02	05:43 21:13	05:44 20:51	06:12 20:02	06:48 19:07	17:15 16:49 (50)	16:33 (50) 16:47
3	08:01 16:57	07:42 17:36	17:07 (50) 18:13	07:00 19:53	07:04 20:29	06:14 21:03	05:43 21:13	05:45 20:49	06:13 20:01	06:49 19:05	17:14 16:48 (50)	16:33 (50) 16:46
4	08:01 16:58	07:41 17:38	17:05 (50) 18:15	06:58 19:54	07:02 20:31	06:12 21:03	05:42 21:13	05:46 20:48	06:14 19:59	06:50 19:03	17:12 16:46 (50)	16:33 (50) 16:46
5	08:01 16:59	07:39 17:39	17:05 (50) 18:16	06:56 19:55	07:00 20:32	06:11 21:04	05:42 21:13	05:46 20:47	06:15 19:57	06:51 19:01	17:11 16:45 (50)	16:34 (50) 16:46
6	08:01 17:00	07:38 17:40	17:05 (50) 18:17	06:55 19:56	06:58 20:33	06:09 21:05	05:47 21:12	06:17 20:46	06:52 19:55	07:28 18:58	17:10 16:35 (50)	11 16:43 (50)
7	08:01 17:01	07:37 17:42	17:04 (50) 18:19	06:53 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:18 20:44	06:54 19:53	07:29 18:56	17:08 16:36 (50)	8 16:43 (50)
8	08:01 17:02	07:36 17:43	17:04 (50) 18:20	07:51 19:59	06:07 20:36	05:41 21:06	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	17:11 16:41 (50)	7 16:37 (50)
9	08:00 17:04	07:34 17:45	17:04 (50) 19:21	07:49 19:21	06:53 20:00	06:05 20:37	05:41 21:07	05:49 21:11	06:20 19:40	06:56 18:52	17:12 17:05	16:38 (50) 1 16:39 (50)
10	08:00 17:05	07:33 17:46	17:04 (50) 19:22	07:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	17:13 17:04	16:38 (50) 16:45
11	08:00 17:06	07:32 17:47	17:04 (50) 19:24	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:50 21:10	06:22 19:46	06:58 18:49	17:15 17:02	16:37 (50) 16:45
12	07:59 17:07	07:30 17:49	17:04 (50) 19:25	07:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 19:44	06:59 18:47	17:02 17:01	16:35 (50) 16:45
13	07:59 17:08	07:29 17:50	17:05 (50) 19:26	07:42 19:26	06:46 20:05	06:01 20:41	05:40 21:09	05:52 21:09	06:25 19:42	07:01 18:45	17:01 17:00	16:34 (50) 16:45
14	07:59 17:09	07:27 17:52	17:06 (50) 19:28	07:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:08	06:26 19:40	07:02 18:43	17:02 16:59	16:33 (50) 16:46
15	07:58 17:11	07:26 17:53	17:08 (50) 19:29	07:39 19:29	06:42 20:07	05:58 20:44	05:40 21:10	05:54 21:08	06:27 19:39	07:03 18:42	17:03 16:58	16:32 (50) 16:46
16	07:58 17:12	07:24 17:54	17:10 (50) 19:30	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 19:37	07:04 18:40	17:04 16:57	16:31 (50) 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:06	06:29 20:30	07:05 19:35	07:42 18:38	17:23 17:16	16:30 (50) 16:46
18	07:56 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37	17:24 17:15	16:29 (50) 16:46
19	07:56 17:16	07:20 17:58	07:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:32 20:26	07:08 19:31	07:44 18:35	17:25 17:16	16:28 (50) 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33	17:27 17:17	16:27 (50) 16:47
21	07:54 17:18	07:17 18:00	07:28 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	17:28 17:18	16:26 (50) 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:02	06:35 20:21	07:11 19:25	07:48 18:30	17:29 17:16	16:25 (50) 16:48
23	07:53 17:21	07:13 18:03	07:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:29	17:31 17:21	16:24 (50) 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:18	05:49 20:53	05:41 21:13	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	17:32 17:22	16:23 (50) 16:49
25	07:51 17:24	07:10 18:05	07:20 19:41	06:26 20:20	05:49 20:54	05:41 21:13	06:03 21:00	06:39 20:16	07:15 19:20	07:52 18:25	17:33 17:24	16:22 (50) 16:50
26	07:50 17:25	07:08 18:07	07:18 19:43	06:24 20:21	05:48 20:55	05:42 21:13	06:04 20:59	06:40 20:15	07:16 19:18	07:53 18:24	17:34 (50) 9 17:48 (50)	16:21 (50) 16:49
27	07:49 17:26	07:07 18:08	07:16 19:44	06:23 20:22	05:47 20:56	05:42 21:13	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:22	17:37 (50) 14 17:51 (50)	16:20 (50) 16:49
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:23	05:46 20:57	05:42 21:13	06:07 20:56	06:42 20:11	07:18 19:14	07:56 18:21	17:35 (50) 17 17:52 (50)	16:19 (50) 16:48
29	07:47 17:29	07:04 18:19	07:13 19:46	06:19 20:25	05:46 20:58	05:43 21:13	06:08 20:55	06:43 20:10	07:19 19:12	07:57 18:19	17:35 (50) 18 17:53 (50)	16:18 (50) 16:48
30	07:46 17:31	07:03 18:31	07:11 19:48	06:18 20:26	05:45 20:59	05:43 21:13	06:09 20:54	06:44 19:11	07:21 18:18	07:59 17:18	17:34 (50) 19 17:53 (50)	16:17 (50) 16:47
31	07:45 17:32	07:02 18:22	07:09 19:49	05:44 21:00	05:44 21:00	06:10 20:53	06:46 20:06	08:00 18:16	18:16 18:16	18:16 18:16	17:34 (50) 18 17:52 (50)	16:16 (50) 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case		183								95	92	
Sun reduction		0.59								0.63	0.50	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.56								0.56	0.56	
Total reduction		0.32								0.34	0.27	
Total, real		59								33	25	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H359 - H359

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	07:09 (46) 07:17 (46)	07:22 19:09	07:02 17:16	07:41 16:47
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:44 21:02	05:45 21:14	06:12 20:51	06:48 20:03	07:10 (46) 07:16 (46)	07:23 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:42 17:37	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:14 20:50	06:49 20:01	07:11 (46) 07:13 (46)	07:25 19:05	07:04 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	06:13 20:31	05:43 21:04	05:46 21:13	06:15 20:49	06:51 19:59	07:11 (46)	07:26 19:04	07:06 17:11	07:44 16:46
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:32	05:42 21:05	05:47 21:13	06:16 20:47	06:52 19:58	07:13 (46)	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:05	05:47 21:13	06:17 20:46	06:53 19:56	07:14 (46)	07:28 19:00	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	06:09 20:35	05:42 21:06	05:48 21:12	06:18 20:45	06:54 19:54	07:15 (46)	07:30 18:56	07:10 17:08	07:47 16:46
8	08:01 17:03	07:36 17:44	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:43	06:55 19:52	07:16 (46)	07:31 18:55	07:11 17:06	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:12	06:20 20:42	06:56 19:50	07:17 (46)	07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	06:05 20:38	05:41 21:08	05:50 21:11	06:22 20:41	06:58 19:48	07:18 (46)	07:33 18:51	07:14 17:04	07:50 16:46
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:39	05:41 21:09	05:51 21:11	06:23 20:39	06:59 19:46	07:19 (46)	07:34 18:49	07:15 17:03	07:51 16:46
12	08:00 17:07	07:31 17:49	07:44 19:26	06:48 20:04	06:02 20:41	05:40 21:09	05:52 21:10	06:24 20:38	07:00 19:45	07:20 (46)	07:36 18:47	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:21 (46)	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:00 20:43	05:40 21:10	05:53 21:09	06:36 20:35	07:02 19:41	07:22 (46)	07:38 18:44	07:19 17:00	07:53 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	06:03 20:44	05:49 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:23 (46)	07:39 18:42	07:21 16:59	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	06:01 20:45	05:48 21:11	05:55 21:08	06:28 20:32	07:05 19:37	07:24 (46)	07:41 18:41	07:22 16:58	07:55 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	06:00 20:46	05:47 21:12	05:56 21:07	06:30 20:30	07:06 19:35	07:25 (46)	07:42 18:39	07:23 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:33 19:33	06:38 20:12	06:58 (46) 20:47	05:55 21:12	05:57 21:06	06:31 20:28	07:07 19:33	07:26 (46)	07:43 18:37	07:25 16:56	07:56 16:47
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	06:56 (46) 20:49	05:54 21:12	05:58 21:05	06:32 20:27	07:08 (46) 19:32	07:27 (46)	07:45 18:35	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	06:57 (46) 20:50	05:53 21:13	05:59 21:05	06:33 20:25	07:09 (46) 19:30	07:28 (46)	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:15	06:57 (46) 20:51	05:53 21:13	06:00 21:04	06:34 20:24	07:10 (46) 19:28	07:29 (46)	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:16	06:58 (46) 20:52	05:41 21:13	06:01 21:03	06:35 20:22	07:12 (46) 19:26	07:30 (46)	07:48 18:31	07:30 16:52	07:59 16:49
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	07:00 (46) 20:53	05:41 21:13	06:02 21:02	06:37 20:20	07:13 (46) 19:24	07:31 (46)	07:50 18:29	07:31 16:52	07:59 16:49
24	07:52 17:23	07:12 18:04	07:22 19:41	06:28 20:19	07:02 (46) 20:54	05:40 21:14	06:03 21:01	06:38 20:19	07:14 (46) 19:22	07:32 (46)	07:51 18:27	07:32 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	07:09 (46) 20:55	05:49 21:14	06:04 21:00	06:39 20:17	07:15 (46) 19:20	07:33 (46)	07:52 18:26	07:33 16:50	08:00 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:25 20:21	07:00 (46) 20:56	05:48 21:14	06:05 21:05	06:40 20:15	07:16 (46) 19:18	07:34 (46)	07:54 18:24	07:35 16:50	08:00 16:51
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	07:01 (46) 20:57	05:47 21:14	06:06 20:58	06:41 20:13	07:17 (46) 19:17	07:35 (46)	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	07:02 (46) 20:58	05:47 21:14	06:07 20:57	06:42 20:12	07:19 (46) 19:15	07:36 (46)	07:56 18:21	07:37 16:49	08:01 16:52
29	07:48 17:30		07:13 19:47	06:20 20:25	07:03 (46) 20:59	05:46 21:14	06:08 20:56	06:44 20:10	07:20 (46) 19:13	07:37 (46)	07:58 18:20	07:38 16:48	08:01 16:53
30	07:47 17:31		07:11 19:48	06:18 20:26	07:04 (46) 21:00	05:44 21:14	06:09 20:55	06:45 20:08	07:21 (46) 19:11	07:38 (46)	07:59 18:18	07:40 16:48	08:01 16:54
31	07:46 17:32		07:09 19:49		07:05 (46) 21:00	05:45 21:00	06:10 20:54	06:46 20:06	07:08 (46) 19:11	07:39 (46)	08:00 18:17	08:01 16:55	
Potential sun hours	287	292	369	403	458	464	470	435	377		341	289	276
Total, worst case				229				216	16				
Sun reduction				0.61				0.74	0.69				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.55				0.55	0.55				
Total reduction				0.33				0.40	0.37				
Total, real				75				86	6				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
	Sun set (hh:mm)					

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H360 - H360

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:01	07:44	07:04	07:24 (52)	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:47 (52)	07:01	07:40	
	16:56	17:34	18:11	24 07:48 (52)	19:50	20:27	21:01	21:13	20:52	20:04	19:09	42 08:29 (52)	17:15	16:47	
2	08:01	07:43	07:02	07:22 (52)	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:46 (52)	07:03	07:41	
	16:57	17:35	18:12	27 07:49 (52)	19:52	20:28	21:02	21:13	20:51	20:03	19:07	43 08:29 (52)	17:14	16:47	
3	08:01	07:42	07:00	07:21 (52)	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:46 (52)	07:04	07:43	
	16:58	17:36	18:14	29 07:50 (52)	19:53	20:30	21:03	21:13	20:50	20:01	19:05	43 08:29 (52)	17:13	16:46	
4	08:01	07:41	06:58	07:19 (52)	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:47 (52)	07:05	07:44	
	16:59	17:38	18:15	32 07:51 (52)	19:54	20:31	21:04	21:13	20:48	19:59	19:03	42 08:29 (52)	17:11	16:46	
5	08:01	07:40	06:57	07:17 (52)	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:48 (52)	07:07	07:45	
	17:00	17:39	18:16	34 07:51 (52)	19:55	20:32	21:04	21:13	20:47	19:57	19:01	41 08:29 (52)	17:10	16:46	
6	08:01	07:38	06:55	07:15 (52)	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:49 (52)	07:08	07:46	
	17:01	17:41	18:17	36 07:51 (52)	19:56	20:33	21:05	21:12	20:46	19:55	19:00	39 08:28 (52)	17:09	16:46	
7	08:01	07:37	06:53	07:14 (52)	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:50 (52)	07:09	07:47	
	17:02	17:42	18:19	38 07:52 (52)	19:58	20:34	21:06	21:12	20:44	19:54	18:56	37 08:27 (52)	17:07	16:46	
8	08:01	07:36	07:51	08:12 (52)	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:30	07:52 (52)	07:11	07:48
	17:03	17:43	18:20	40 08:52 (52)	19:59	20:36	21:06	21:12	20:43	19:52	18:54	35 08:27 (52)	17:06	16:45	
9	08:01	07:34	07:50	08:10 (52)	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:32	07:53 (52)	07:12	07:49
	17:04	17:45	19:21	41 08:51 (52)	20:00	20:37	21:07	21:11	20:42	19:50	18:52	33 08:26 (52)	17:05	16:45	
10	08:00	07:33	07:48	08:08 (52)	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:33	07:54 (52)	07:14	07:50
	17:05	17:46	19:23	43 08:51 (52)	20:01	20:38	21:08	21:11	20:40	19:48	18:51	31 08:25 (52)	17:04	16:45	
11	08:00	07:32	07:46	08:07 (52)	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:34	07:55 (52)	07:15	07:51
	17:06	17:48	19:24	43 08:50 (52)	20:03	20:39	21:08	21:10	20:39	19:46	18:49	28 08:23 (52)	17:03	16:45	
12	08:00	07:30	07:44	08:07 (52)	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:35	07:57 (52)	07:16	07:51
	17:07	17:49	19:25	43 08:50 (52)	20:04	20:40	21:09	21:10	20:37	19:44	18:47	26 08:23 (52)	17:02	16:45	
13	07:59	07:29	07:42	08:08 (52)	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:37	07:58 (52)	07:18	07:52
	17:08	17:50	19:27	42 08:50 (52)	20:05	20:41	21:10	21:09	20:36	19:43	18:45	23 08:21 (52)	17:00	16:46	
14	07:59	07:27	07:41	08:08 (52)	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:38	07:59 (52)	07:19	07:53
	17:10	17:52	19:28	41 08:49 (52)	20:06	20:43	21:10	21:09	20:34	19:41	18:44	20 08:19 (52)	16:59	16:46	
15	07:58	07:26	07:39	08:08 (52)	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:39	08:01 (52)	07:20	07:54
	17:11	17:53	19:29	40 08:48 (52)	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16 08:17 (52)	16:58	16:46	
16	07:58	07:24	07:37	08:08 (52)	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:40	08:02 (52)	07:22	07:55
	17:12	17:55	19:30	39 08:47 (52)	20:09	20:45	21:11	21:07	20:31	19:37	18:40	12 08:14 (52)	16:57	16:46	
17	07:57	07:23	07:35	08:09 (52)	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:42	08:03 (52)	07:23	07:55
	17:13	17:56	19:32	37 08:46 (52)	20:10	20:46	21:11	21:07	20:30	19:35	18:39	7 08:10 (52)	16:56	16:46	
18	07:57	07:21	07:33	08:09 (52)	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:43	07:54 (52)	07:24	07:56
	17:15	17:57	19:33	35 08:44 (52)	20:11	20:47	21:12	21:06	20:28	19:33	18:37	18:37	16:56	16:47	
19	07:56	07:20	07:31	08:11 (52)	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:44	07:55 (52)	07:26	07:57
	17:16	17:59	19:34	32 08:43 (52)	20:13	20:48	21:12	21:05	20:27	19:31	18:35	18:35	16:55	16:47	
20	07:55	07:18	07:30	08:12 (52)	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:46	07:57 (52)	07:27	07:57
	17:17	18:00	19:35	29 08:41 (52)	20:14	20:49	21:12	21:04	20:25	19:29	18:34	10 08:17 (52)	16:54	16:48	
21	07:55	07:17	07:28	08:14 (52)	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:47	08:02 (52)	07:28	07:58
	17:18	18:00	19:37	25 08:39 (52)	20:15	20:50	21:13	21:03	20:23	19:28	18:32	18 08:20 (52)	16:53	16:48	
22	07:54	07:15	07:26	08:16 (52)	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:48	07:59 (52)	07:29	07:58
	17:20	18:01	19:38	20 08:36 (52)	20:16	20:51	21:13	21:03	20:22	19:26	18:30	24 08:23 (52)	16:52	16:48	
23	07:53	07:14	07:24	08:19 (52)	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:49	07:56 (52)	07:31	07:59
	17:21	18:03	19:39	13 08:32 (52)	20:17	20:52	21:13	21:02	20:20	19:24	18:29	28 08:24 (52)	16:52	16:49	
24	07:52	07:12	07:22	07:33 (52)	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:51	08:05 (52)	07:24	07:59
	17:22	18:04	2 07:35 (52)	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	31 08:26 (52)	16:51	16:50	
25	07:51	07:10	07:20	07:31 (52)	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:52	08:06 (52)	07:33	08:00
	17:24	18:05	9 07:40 (52)	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	34 08:27 (52)	16:50	16:50	
26	07:50	07:09	07:29 (52)	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:53	08:07 (52)	07:34	08:00
	17:25	18:07	14 07:43 (52)	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	36 08:28 (52)	16:50	16:51	
27	07:49	07:07	07:28 (52)	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:50 (52)	07:50 (52)	08:01 (52)	07:36	08:00
	17:27	18:08	18 07:46 (52)	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	38 08:28 (52)	16:49	16:52	
28	07:48	07:05	07:26 (52)	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:56	08:09 (52)	07:37	08:01
	17:28	18:10	21 07:47 (52)	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	39 08:28 (52)	16:49	16:52	
29	07:47		07:13		06:20	05:46	05:43	06:08	06:43	07:20	07:50 (52)	07:50 (52)	08:01 (52)	07:38	08:01
	17:29		19:47		20:25	20:58	21:14	20:56	20:10	19:13	18:20	41 08:30 (52)	16:48	16:53	
30	07:46		07:11		06:18	05:45	05:43	06:09	06:45	07:21	07:59 (52)	07:59 (52)	08:10 (52)	07:39	08:01
	17:31		19:48		20:26	20:59	21:14	20:54	20:08	19:11	18:18	42 08:30 (52)	16:48	16:54	
31	07:45		07:09		05:45	05:45	06:10	06:46	07:22	08:00	08:00		08:01 (52)	08:01	08:01
	17:32		19:49		21:00	21:00	20:53	20:06	20:06	18:17	18:17		16:48	16:54	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	341	289	276		
Total, worst case			783							341		518			
Sun reduction		64	0.59							0.69		0.63			
Oper. time red.		0.98	0.98							0.98		0.98			
Wind dir. red.		0.62	0.62							0.62		0.62			
Total reduction		0.36	0.36							0.42		0.38			
Total, real		23	281							143		199			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H361 - H361

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December						
1	08:01	07:44	07:04	07:07	07:29 (53)	06:17	05:44	05:44	06:11	06:47	07:29 (53)	07:22	07:43 (54)	07:01	07:40			
	16:56	17:34	18:11	19:50	56	08:25 (53)	20:27	21:01	21:13	20:52	20:04	49	08:18 (53)	19:09	14	07:57 (54)	17:15	16:47
2	08:01	07:43	07:02	07:06	07:30 (53)	06:15	05:44	05:45	06:12	06:48	07:28 (53)	07:23	07:44 (54)	07:03	07:41			
	16:57	17:35	18:12	19:52	56	08:26 (53)	20:28	21:02	21:13	20:51	20:03	51	08:19 (53)	19:07	12	07:56 (54)	17:14	16:47
3	08:01	07:42	07:00	07:04	07:29 (53)	06:14	05:43	05:45	06:13	06:49	07:27 (53)	07:24	07:45 (54)	07:04	07:43			
	16:58	17:36	18:14	19:53	56	08:25 (53)	20:30	21:03	21:13	20:50	20:01	52	08:19 (53)	19:05	9	07:54 (54)	17:13	16:46
4	08:01	07:41	06:58	07:02	07:29 (53)	06:12	05:43	05:46	06:15	06:50	07:26 (53)	07:26	07:47 (54)	07:05	07:44			
	16:59	17:38	18:15	19:54	56	08:25 (53)	20:31	21:03	21:13	20:48	19:59	53	08:19 (53)	19:03	5	07:52 (54)	17:11	16:46
5	08:01	07:40	06:57	07:00	07:28 (53)	06:11	05:42	05:46	06:16	06:52	07:25 (53)	07:27	07:48 (54)	07:07	07:45			
	17:00	17:39	18:16	19:55	56	08:24 (53)	20:32	21:04	21:13	20:47	19:57	54	08:19 (53)	19:01	1	07:49 (54)	17:10	16:46
6	08:01	07:38	06:55	06:58	07:28 (53)	06:10	05:42	05:47	06:17	06:53	07:24 (53)	07:28	07:49 (54)	07:08	07:46			
	17:01	17:41	18:17	19:56	55	08:23 (53)	20:33	21:05	21:12	20:46	19:55	55	08:19 (53)	19:00	17:09	16:46		
7	08:01	07:37	06:53	06:57	07:29 (53)	06:08	05:41	05:48	06:18	06:54	07:23 (53)	07:29	07:49 (54)	07:09	07:47			
	17:02	17:42	18:19	19:58	54	08:23 (53)	20:34	21:06	21:12	20:44	19:54	56	08:19 (53)	18:56	17:07	16:46		
8	08:01	07:36	07:51	06:55	07:29 (53)	06:07	05:41	05:48	06:19	06:55	07:23 (53)	07:30	07:49 (54)	07:11	07:48			
	17:03	17:43	18:20	19:59	53	08:22 (53)	20:36	21:06	21:12	20:43	19:52	56	08:19 (53)	18:54	17:06	16:46		
9	08:01	07:34	07:50	06:53	07:29 (53)	06:06	05:41	05:49	06:20	06:56	07:23 (53)	07:32	07:49 (54)	07:12	07:49			
	17:04	17:45	19:21	3	08:13 (54)	20:00	52	08:21 (53)	20:37	21:07	21:11	20:42	19:50	56	08:19 (53)	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	07:29 (53)	06:04	05:41	05:50	06:21	06:57	07:23 (53)	07:33	07:49 (54)	07:14	07:50			
	17:05	17:46	19:23	7	08:15 (54)	20:01	51	08:20 (53)	20:38	21:08	21:11	20:40	19:48	56	08:19 (53)	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	08:06 (54)	06:49	05:40	05:51	06:22	06:58	07:22 (53)	07:34	07:49 (54)	07:15	07:50			
	17:06	17:48	19:24	10	08:16 (54)	20:03	49	08:19 (53)	20:39	21:08	21:10	20:39	19:46	56	08:18 (53)	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	08:04 (54)	06:48	05:40	05:51	06:24	07:00	07:22 (53)	07:35	07:49 (54)	07:16	07:51			
	17:07	17:49	19:25	13	08:17 (54)	20:04	48	08:18 (53)	20:40	21:09	21:10	20:37	19:44	56	08:18 (53)	18:47	17:02	16:45
13	07:59	07:29	07:42	06:46	08:03 (54)	06:46	05:40	05:52	06:25	07:01	07:22 (53)	07:37	07:49 (54)	07:18	07:52			
	17:08	17:50	19:27	16	08:19 (54)	20:05	45	08:16 (53)	20:41	21:09	21:09	20:36	19:42	55	08:17 (53)	18:45	17:00	16:46
14	07:59	07:27	07:41	06:44	08:01 (54)	06:44	05:40	05:53	06:26	07:02	07:23 (53)	07:38	07:49 (54)	07:19	07:53			
	17:10	17:52	19:28	18	08:19 (54)	20:06	44	08:15 (53)	20:43	21:10	21:09	20:34	19:41	53	08:16 (53)	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	07:59 (54)	06:42	05:40	05:54	06:27	07:03	07:24 (53)	07:39	07:49 (54)	07:20	07:54			
	17:11	17:53	19:29	20	08:19 (54)	20:08	41	08:14 (53)	20:44	21:10	21:08	20:33	19:39	51	08:15 (53)	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	07:57 (54)	06:41	05:40	05:55	06:28	07:04	07:25 (53)	07:40	07:49 (54)	07:22	07:55			
	17:12	17:55	19:30	22	08:19 (54)	20:09	38	08:12 (53)	20:45	21:11	21:07	20:31	19:37	49	08:14 (53)	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	07:55 (54)	06:39	05:40	05:56	06:29	07:05	07:27 (53)	07:42	07:49 (54)	07:23	07:55			
	17:13	17:56	19:32	23	08:18 (54)	20:10	35	08:10 (53)	20:46	21:11	21:07	20:30	19:35	47	08:14 (53)	18:39	16:56	16:46
18	07:57	07:21	07:33	06:37	07:53 (54)	06:37	05:40	05:57	06:31	07:07	07:28 (53)	07:43	07:49 (54)	07:24	07:56			
	17:15	17:57	19:33	25	08:18 (54)	20:11	31	08:08 (53)	20:47	21:12	21:06	20:28	19:33	45	08:13 (53)	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	07:51 (54)	06:36	05:40	05:58	06:32	07:08	07:29 (53)	07:44	07:49 (54)	07:25	07:57			
	17:16	17:59	19:34	27	08:18 (53)	20:12	27	08:05 (53)	20:48	21:12	21:05	20:26	19:31	43	08:12 (53)	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	07:50 (53)	06:34	05:40	05:59	06:33	07:09	07:30 (53)	07:46	07:49 (54)	07:27	07:57			
	17:17	18:00	19:35	31	08:21 (53)	20:14	22	08:02 (53)	20:49	21:12	21:04	20:25	19:29	40	08:10 (53)	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	07:48 (53)	06:32	05:40	06:00	06:34	07:10	07:31 (53)	07:47	07:49 (54)	07:28	07:58			
	17:18	18:00	19:37	34	08:22 (53)	20:15	13	07:58 (53)	20:50	21:13	21:03	20:23	19:28	38	08:09 (53)	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	07:46 (53)	06:31	05:51	05:41	06:01	06:35	07:11	07:26	07:29 (53)	07:48	07:58			
	17:20	18:01	19:38	37	08:23 (53)	20:16	20:51	21:13	21:03	20:22	15	07:49 (53)	07:11	07:32 (53)	07:48	16:59	16:48	
23	07:53	07:14	07:24	06:29	07:44 (53)	06:29	05:51	05:41	06:02	06:36	07:12	07:27	07:33 (53)	07:49	07:59			
	17:21	18:03	19:39	40	08:24 (53)	20:17	20:52	21:13	21:02	20:20	22	08:07 (53)	19:24	32	08:05 (53)	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	07:42 (53)	06:27	05:50	05:41	06:03	06:38	07:14	07:29	07:35 (54)	07:51	07:59			
	17:22	18:04	19:40	42	08:24 (53)	20:19	20:53	21:13	21:01	20:18	27	08:09 (53)	19:22	28	08:03 (53)	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	07:40 (53)	06:26	05:49	05:41	06:04	06:39	07:39 (53)	07:15	07:36 (54)	07:52	07:59			
	17:24	18:05	19:42	45	08:25 (53)	20:20	20:54	21:13	21:00	20:17	32	08:11 (53)	19:20	25	08:01 (54)	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	07:38 (53)	06:24	05:48	05:42	06:05	06:40	07:37 (53)	07:16	07:37 (54)	07:53	07:54			
	17:25	18:07	19:43	47	08:25 (53)	20:21	20:55	21:13	20:59	20:15	36	08:13 (53)	19:18	24	08:01 (54)	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	07:37 (53)	06:23	05:47	05:42	06:06	06:41	07:35 (53)	07:17	07:38 (54)	07:55	07:56			
	17:27	18:08	19:44	49	08:26 (53)	20:22	20:56	21:14	20:58	20:13	39	08:14 (53)	19:16	22	08:00 (54)	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	07:35 (53)	06:21	05:47	05:43	06:07	06:42	07:34 (53)	07:18	07:39 (54)	07:56	07:57			
	17:28	18:10	19:45	51	08:26 (53)	20:24	20:57	21:14	20:57	20:11	41	08:15 (53)	19:14	21	08:00 (54)	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	07:33 (53)	06:20	05:46	05:43	06:08	06:43	07:32 (53)	07:20	07:40 (54)	07:57	07:58			
	17:29	18:11	19:47	53	08:26 (53)	20:25	20:58	21:14	20:55	20:10	44	08:16 (53)	19:13	19	07:59 (54)	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	07:31 (53)	06:18	05:45	05:44	06:09	06:45	07:30 (53)	07:21	07:42 (54)	07:59	07:59			
	17:31	19:48	19:48	55	08:26 (53)	20:26	20:59	21:13	20:54	20:08	46	08:16 (53)	19:11	17	07:59 (54)	18:18	16:48	16:54
31	07:45	07:09	07:19	06:15	07:30 (53)	06:15	05:45	05:45	06:10	06:46	07:30 (53)	07:21	07:42 (54)	07:59	07:59			
	17:32	19:49	19:49	56	08:26 (53)	20:26	21:00	21:00	20:53	20:06	48	08:18 (53)	19:11	17	07:59 (54)	18:18	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	350	377	341	289	276					
Total, worst case			724	938	</													

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H362 - H362

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:01	08:39 (57)	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40			
	16:56	17	08:56 (57)	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47		
2	08:01	08:40 (57)	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41			
	16:57	16	08:56 (57)	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47		
3	08:01	08:41 (57)	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43			
	16:58	16	08:57 (57)	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47		
4	08:01	08:42 (57)	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:06	07:44	08:33 (57)		
	16:59	14	08:56 (57)	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46	4	08:37 (57)
5	08:01	08:42 (57)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	08:31 (57)		
	17:00	13	08:55 (57)	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46	8	08:39 (57)
6	08:01	08:44 (57)	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46	08:30 (57)		
	17:01	11	08:55 (57)	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46	11	08:41 (57)
7	08:01	08:46 (57)	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47	08:30 (57)		
	17:02	8	08:54 (57)	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46	12	08:42 (57)
8	08:01	08:49 (57)	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48	08:29 (57)		
	17:03	4	08:53 (57)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46	14	08:43 (57)
9	08:01		07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49	08:29 (57)		
	17:04		17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46	15	08:44 (57)	
10	08:00		07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50	08:29 (57)		
	17:05		17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46	16	08:45 (57)	
11	08:00		07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51	08:29 (57)		
	17:06		17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46	17	08:46 (57)	
12	08:00		07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51	08:29 (57)		
	17:07		17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46	18	08:47 (57)	
13	07:59		07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52	08:30 (57)		
	17:08		17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46	18	08:48 (57)	
14	07:59		07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53	08:29 (57)		
	17:10		17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46	19	08:48 (57)	
15	07:58		07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54	08:30 (57)		
	17:11		17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46	19	08:49 (57)	
16	07:58		07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55	08:30 (57)		
	17:12		17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46	20	08:50 (57)	
17	07:57		07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55	08:31 (57)		
	17:13		17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47	20	08:51 (57)	
18	07:57		07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56	08:31 (57)		
	17:15		17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47	20	08:51 (57)	
19	07:56		07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57	08:31 (57)		
	17:16		17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47	21	08:52 (57)	
20	07:55		07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57	08:31 (57)		
	17:17		18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48	21	08:52 (57)	
21	07:55		07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58	08:32 (57)		
	17:19		18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48	21	08:53 (57)	
22	07:54		07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58	08:32 (57)		
	17:20		18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49	21	08:53 (57)	
23	07:53		07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59	08:33 (57)		
	17:21		18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49	21	08:54 (57)	
24	07:52		07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59	08:33 (57)		
	17:23		18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50	21	08:54 (57)	
25	07:51		07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00	08:34 (57)		
	17:24		18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50	21	08:55 (57)	
26	07:50		07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00	08:35 (57)		
	17:25		18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51	20	08:55 (57)	
27	07:49		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00	08:35 (57)		
	17:27		18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52	20	08:55 (57)	
28	07:48		07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01	08:35 (57)		
	17:28		18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:14	18:21	16:49	16:52	20	08:55 (57)	
29	07:47		07:13	06:20	05:46	05:43	05:43	06:08	06:43	07:20	07:57	07:38	08:01	08:37 (57)		
	17:29		19:47	20:25	20:58	21:14	21:04	20:56	20:10	19:13	18:20	16:48	16:53	19	08:56 (57)	
30	07:46		07:11	06:18	05:45	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01	08:37 (57)		
	17:31		19:48	20:26	20:59	21:14	21:04	20:54	20:08	19:11	18:18	16:48	16:54	19	08:56 (57)	
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01	08:01	08:38 (57)		
	17:32		19:49		21:00		20:53	20:06		18:17		16:55	18	08:56 (57)		
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276				
Total, worst case		99													494	
Sun reduction		0.57													0.49	
Oper. time red.		0.98													0.98	
Wind dir. red.		0.70													0.70	
Total reduction		0.39													0.34	
Total, real		39													166	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H363 - H363

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H364 - H364

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H365 - H365

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H366 - H366

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:55	16:46
19	07:56	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:22	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H367 - H367

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:46	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:02
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H368 - H368

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:46	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H369 - H369

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H370 - H370

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H371 - H371

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
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29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H372 - H372

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:48
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:49
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:59
	17:18	18:00	19:37	20:15	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:12	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	08:00
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H373 - H373

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:46
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H374 - H374

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:51	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:47
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:48
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:49
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:27	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:59
	17:18	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	08:00
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:28	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H375 - H375

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:45
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:43	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H376 - H376

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:31	21:04	21:14	20:51	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:18	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H377 - H377

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H378 - H378

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:46
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:02	16:45
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:57	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
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	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H379 - H379

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:31	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:18	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:39	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:44	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H380 - H380

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	08:00	07:40	08:02
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31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
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Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H381 - H381

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

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	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
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5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
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	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H382 - H382

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H383 - H383

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H384 - H384

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
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	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H385 - H385

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:46
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
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	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
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26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H386 - H386

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H387 - H387

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
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28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
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30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
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Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
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SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H388 - H388

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

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	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
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	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H389 - H389

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H390 - H390

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H391 - H391

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H392 - H392

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H393 - H393

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H394 - H394

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H395 - H395

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H396 - H396

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H397 - H397

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H398 - H398

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H399 - H399

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H400 - H400

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H401 - H401

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
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21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H402 - H402

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H403 - H403

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H404 - H404

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H405 - H405

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H406 - H406

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H407 - H407

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H408 - H408

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
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26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
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27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H409 - H409

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:56	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H410 - H410

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
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Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H411 - H411

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
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5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
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7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H412 - H412

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H413 - H413

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H414 - H414

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H415 - H415

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
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	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H416 - H416

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H417 - H417

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H418 - H418

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H419 - H419

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H420 - H420

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H421 - H421

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H422 - H422

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H423 - H423

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H424 - H424

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H425 - H425

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H426 - H426

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H427 - H427

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H428 - H428

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H429 - H429

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H430 - H430

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H431 - H431

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H432 - H432

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H433 - H433

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H434 - H434

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H435 - H435

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H436 - H436

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H437 - H437

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H438 - H438

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
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	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
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26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H439 - H439

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H440 - H440

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H441 - H441

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H442 - H442

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H443 - H443

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H444 - H444

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H445 - H445

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
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27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H446 - H446

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H447 - H447

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H448 - H448

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H449 - H449

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H450 - H450

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H451 - H451

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H452 - H452

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:56	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:25	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H453 - H453

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H454 - H454

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H455 - H455

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H456 - H456

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H457 - H457

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H458 - H458

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H459 - H459

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H460 - H460

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H461 - H461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H462 - H462

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H463 - H463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H464 - H464

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H465 - H465

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H466 - H466

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H467 - H467

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H468 - H468

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H469 - H469

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H470 - H470

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
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Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H471 - H471

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H472 - H472

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H473 - H473

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H474 - H474

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H475 - H475

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
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	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H476 - H476

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H477 - H477

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
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30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
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	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H478 - H478

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
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	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H479 - H479

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H480 - H480

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H481 - H481

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H482 - H482

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H483 - H483

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H484 - H484

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
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10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
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13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
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30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
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Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
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SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H485 - H485

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

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1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
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	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H486 - H486

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H487 - H487

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H488 - H488

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H489 - H489

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H490 - H490

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H491 - H491

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H492 - H492

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:20	06:56	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:25	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:11	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H493 - H493

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H494 - H494

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:12	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:20	06:56	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:11	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H495 - H495

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H496 - H496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V126-3.3 87m HH v25Shadow receptor: H497 - H497

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
949	364	341	374	484	625	1,208	924	579	685	870	1,170	8,575

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
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	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:23	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
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18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
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	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
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	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
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27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

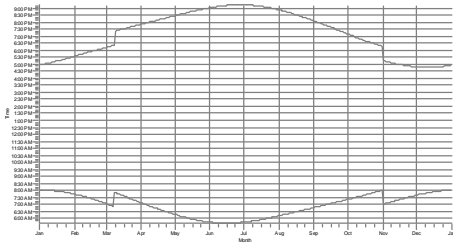
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

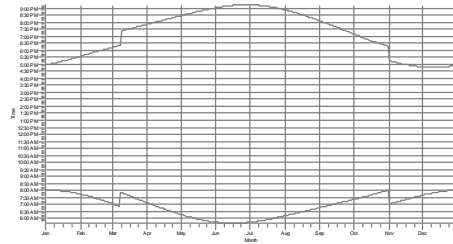
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

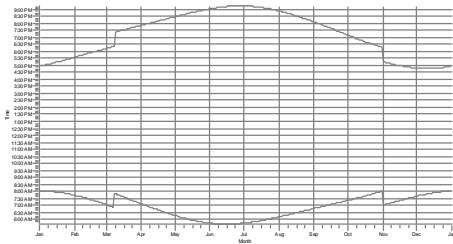
H048: H048



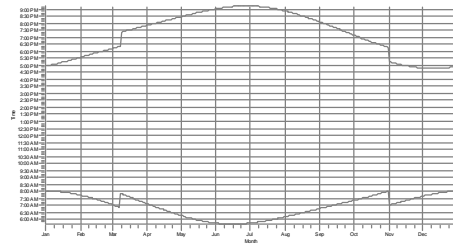
H049: H049



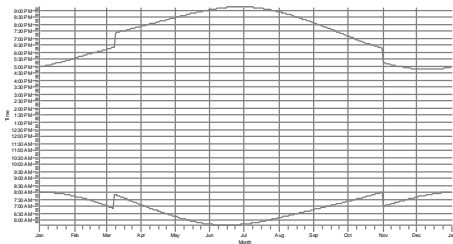
H050: H050



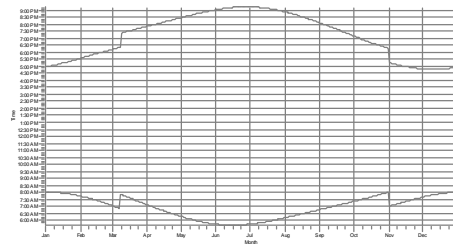
H051: H051



H052: H052



H053: H053



WTGs

Project:

20162030 Westwood Red Pine

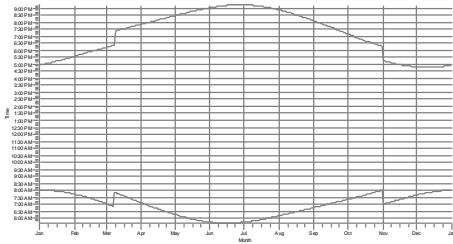
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+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

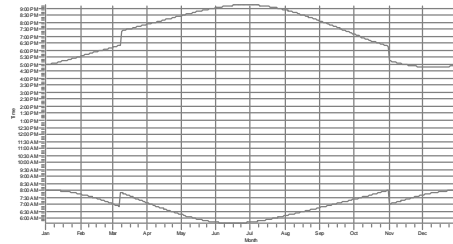
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

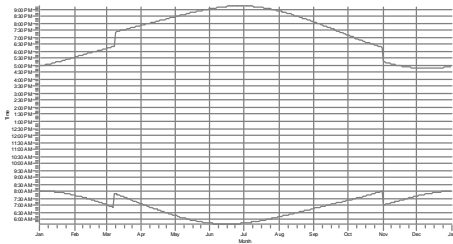
H080: H080



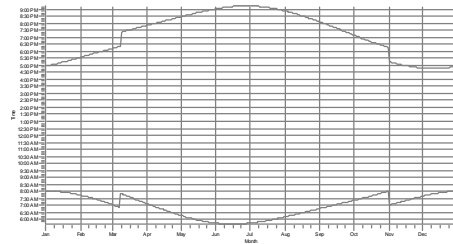
H081: H081



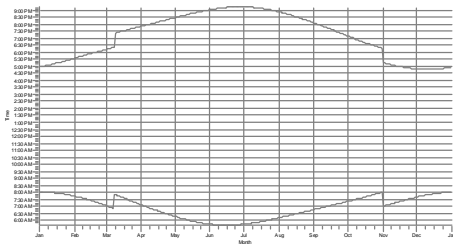
H082: H082



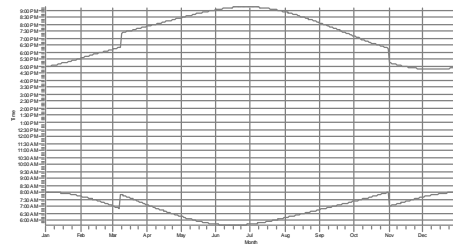
H083: H083



H084: H084



H085: H085



WTGs

Project:

20162030 Westwood Red Pine

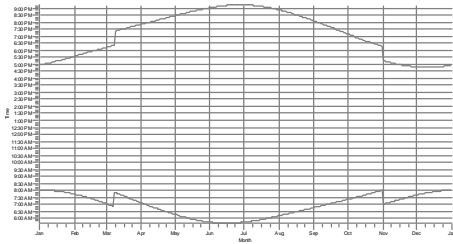
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

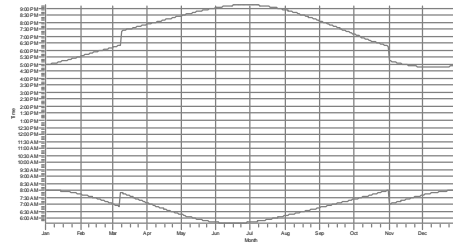
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

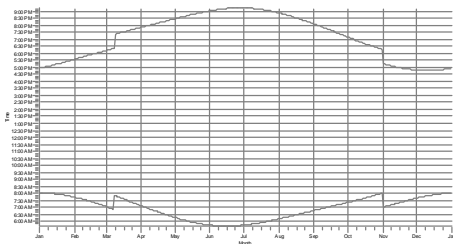
H086: H086



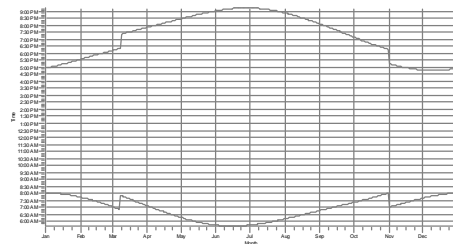
H087: H087



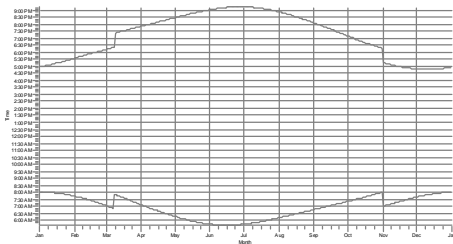
H088: H088



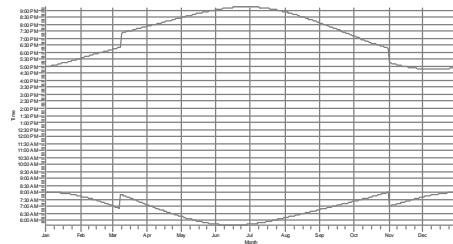
H090: H090



H091: H091



H092: H092



WTGs

Project:

20162030 Westwood Red Pine

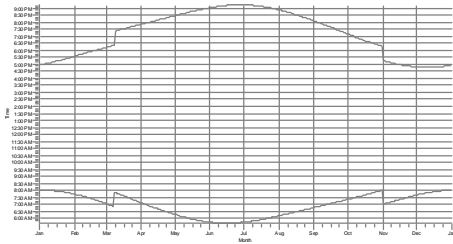
Licensed user:

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US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

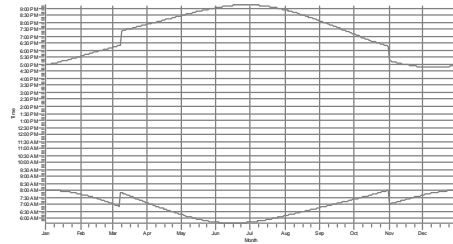
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

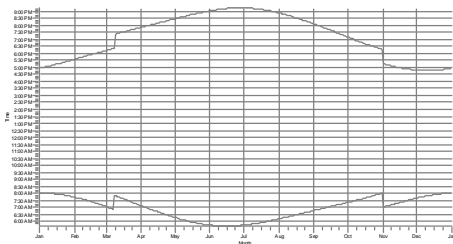
H093: H093



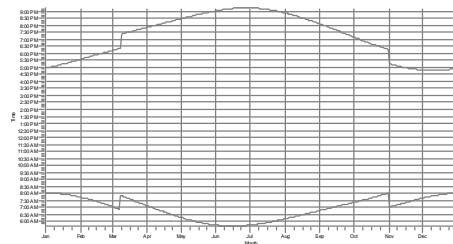
H094: H094



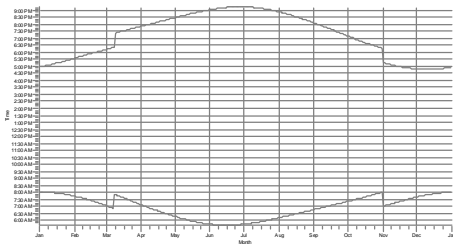
H095: H095



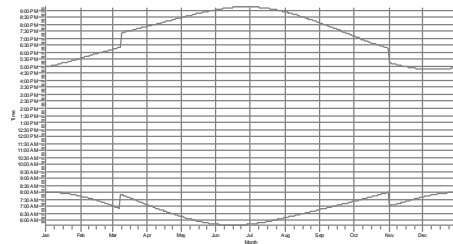
H096: H096



H097: H097



H112: H112



WTGs

Project:

20162030 Westwood Red Pine

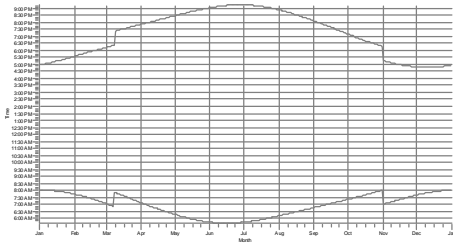
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

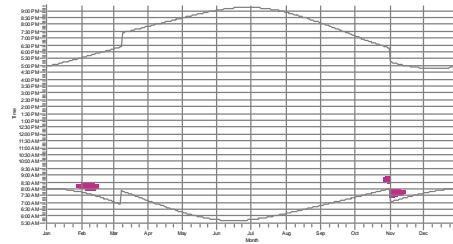
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

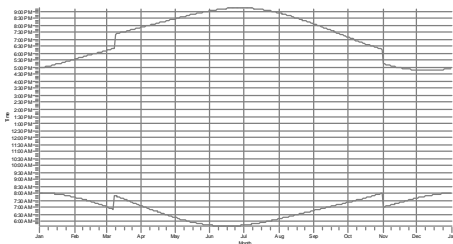
H113: H113



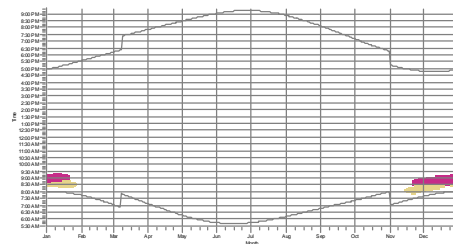
H114: H114



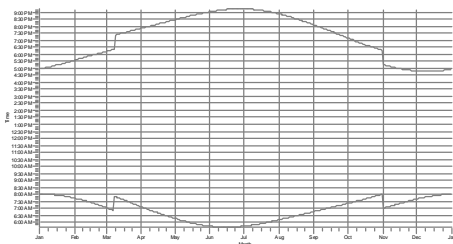
H115: H115



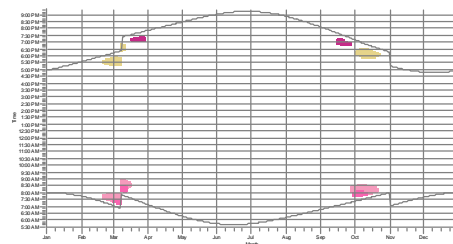
H116: H116



H117: H117



H118: H118



WTGs

- 57: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1499)
- 58: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1475)
- 59: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1481)
- 60: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1486)

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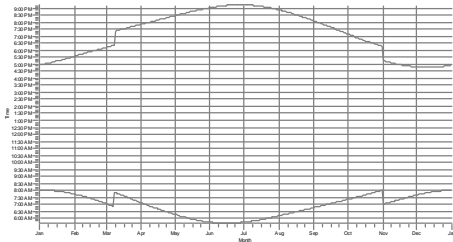
Licensed user:

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Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

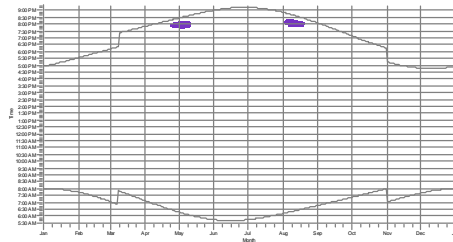
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

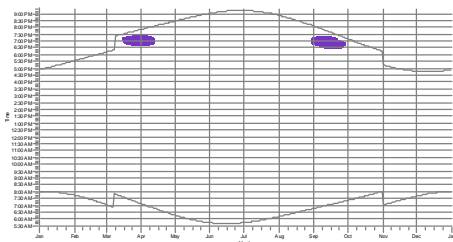
H119: H119



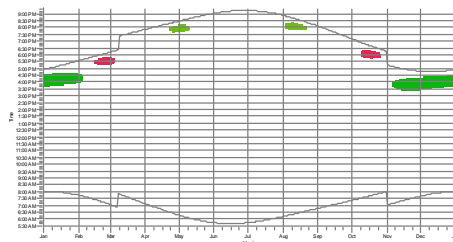
H147: H147



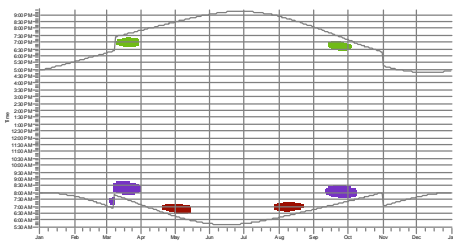
H148: H148



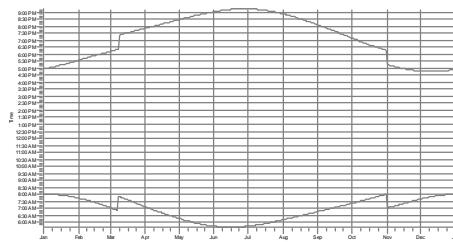
H149: H149



H150: H150



H151: H151



WTGs

- 51: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1458)
- 53: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1488)
- 55: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1456)
- 52: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1484)
- 54: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1463)

Project:

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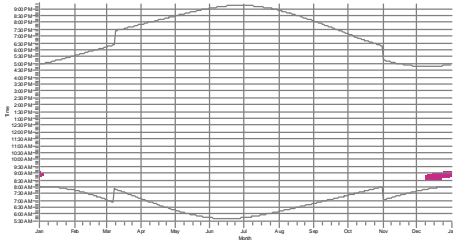
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Calculated:
6/24/2016 3:33 PM/3.0.654

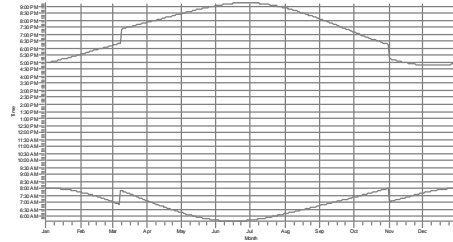
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

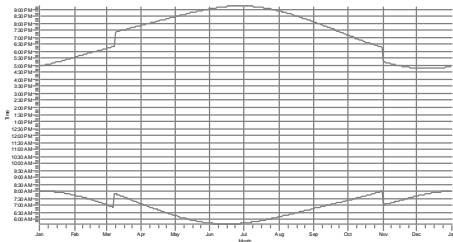
H152: H152



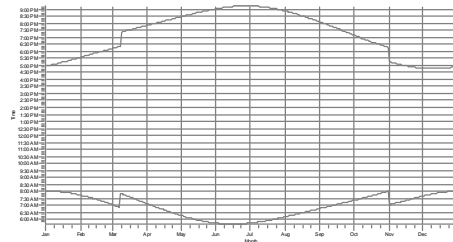
H153: H153



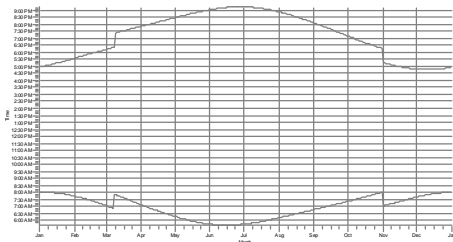
H154: H154



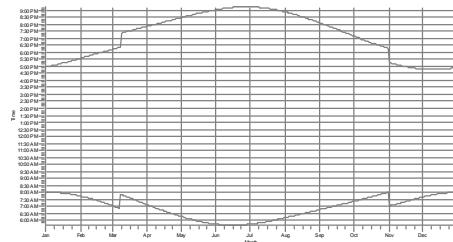
H155: H155



H156: H156



H157: H157



WTGs

57: VESTAS V126-3.3 3300 126.0 I0I hub: 87.0 m (TOT: 150.0 m) (1499)

Project:

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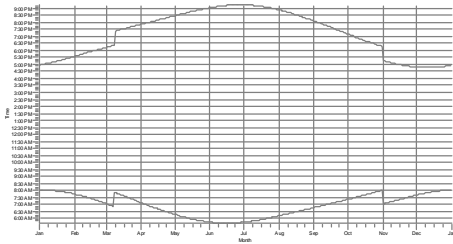
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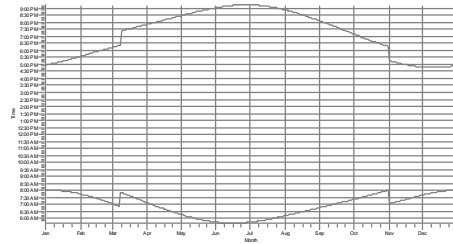
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

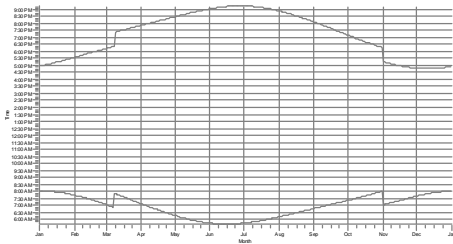
H161: H161



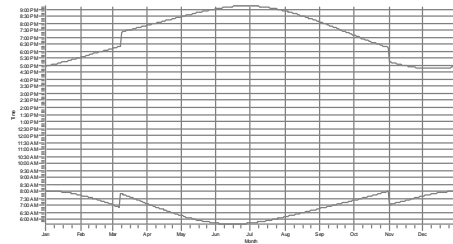
H163: H163



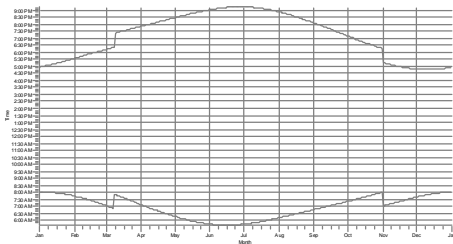
H165: H165



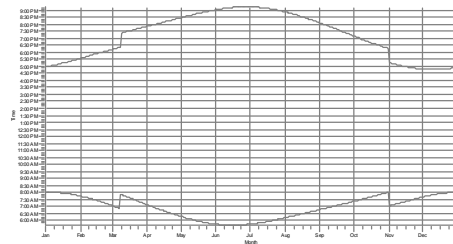
H166: H166



H167: H167



H168: H168



WTGs

Project:

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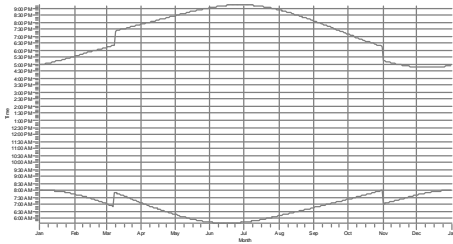
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Calculated:
6/24/2016 3:33 PM/3.0.654

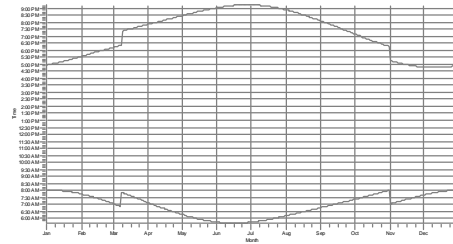
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

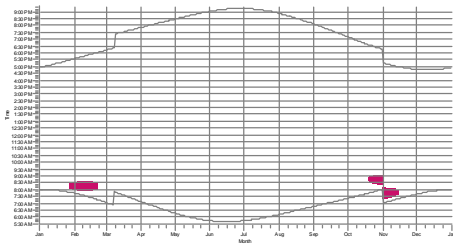
H169: H169



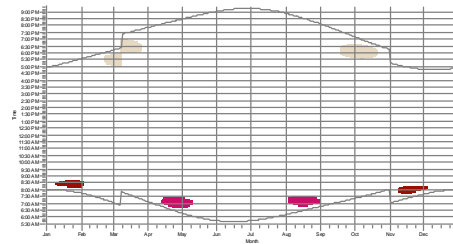
H170: H170



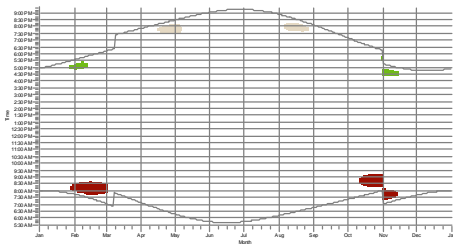
H171: H171



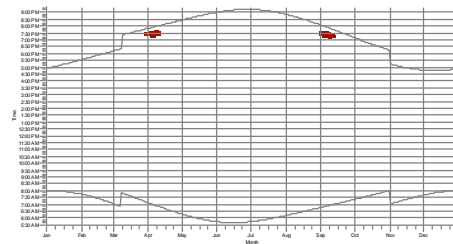
H172: H172



H173: H173



H174: H174



WTGs

- 49: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1470)
- 50: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1484)
- 51: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1458)
- 52: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1484)

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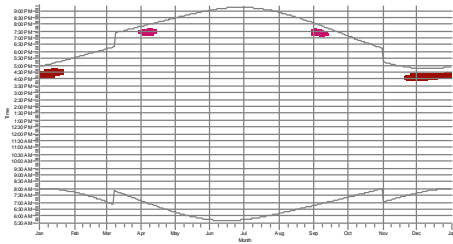
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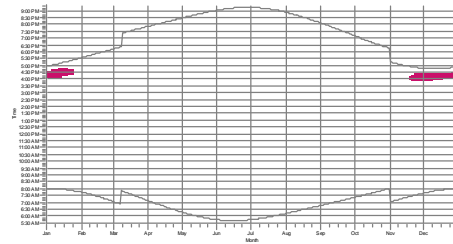
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

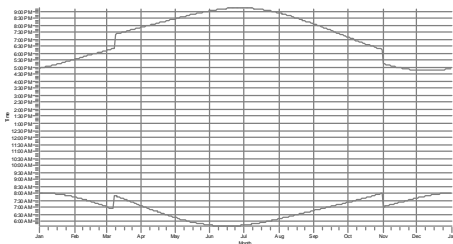
H175: H175



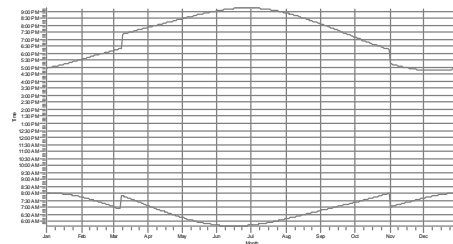
H198: H198



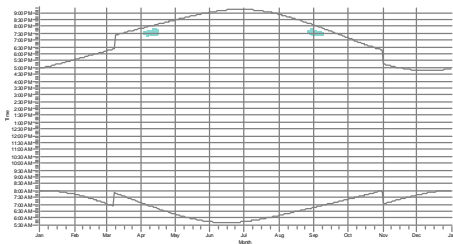
H199: H199



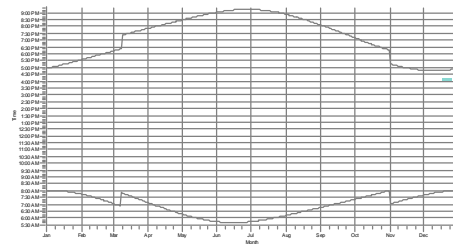
H200: H200



H201: H201



H202: H202



WTGs

48: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1495) 50: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1484) 51: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1458)

Project:

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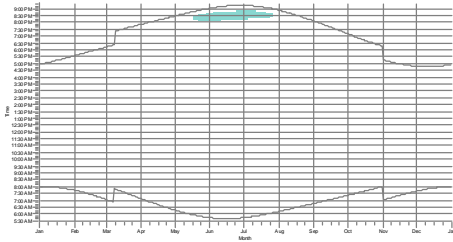
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Calculated:
6/24/2016 3:33 PM/3.0.654

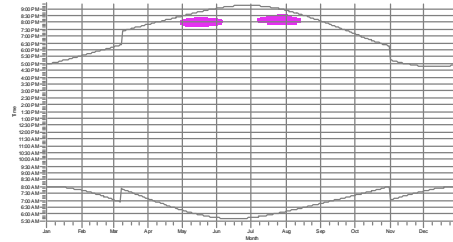
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

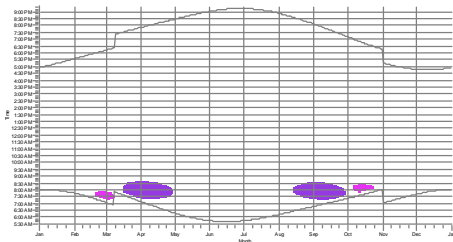
H203: H203



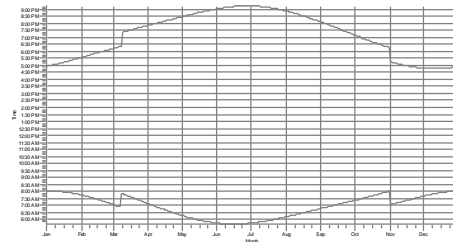
H204: H204



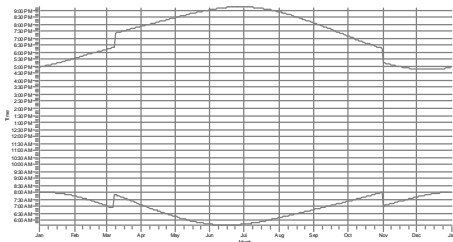
H206: H206



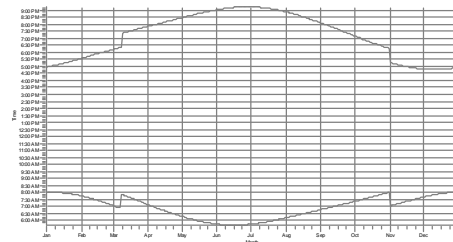
H207: H207



H208: H208



H209: H209



WTGs

- 46: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1490)
- 47: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1482)
- 48: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1495)

Project:

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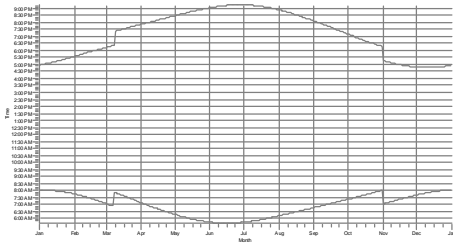
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Calculated:
6/24/2016 3:33 PM/3.0.654

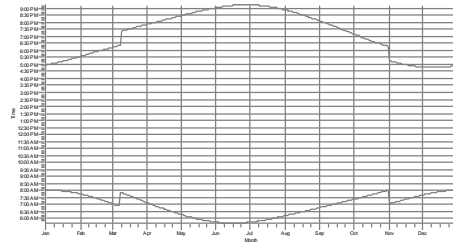
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

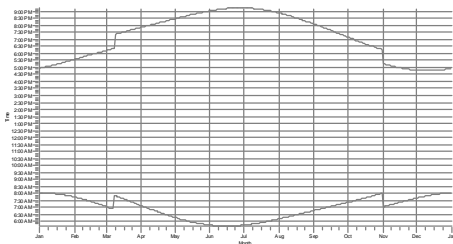
H210: H210



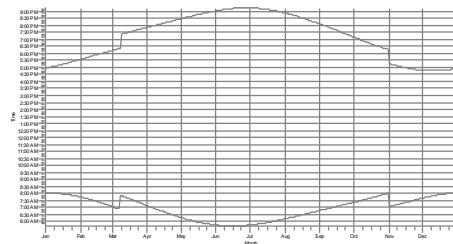
H211: H211



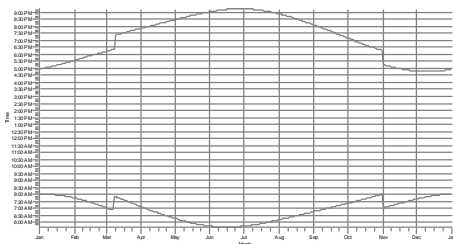
H212: H212



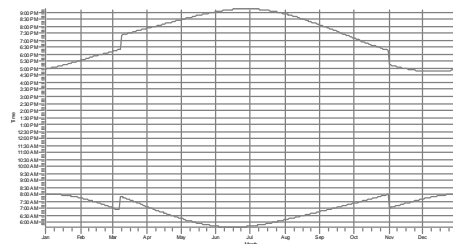
H213: H213



H214: H214



H215: H215



WTGs

Project:

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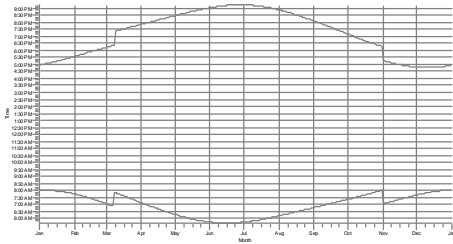
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6/24/2016 3:33 PM/3.0.654

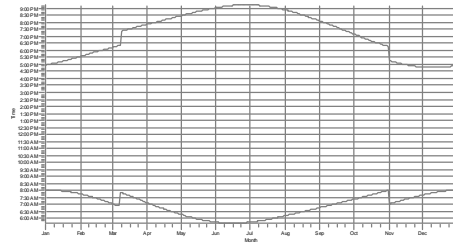
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

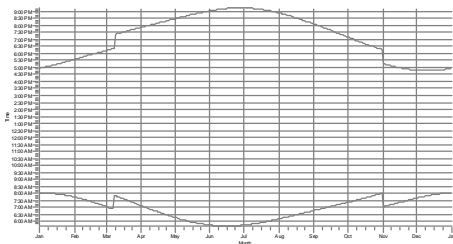
H217: H217



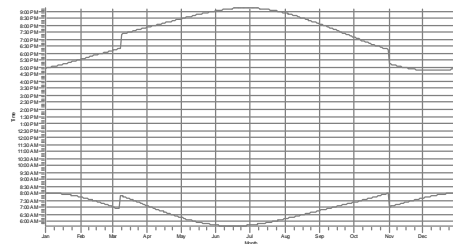
H220: H220



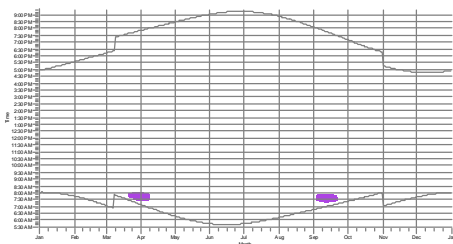
H221: H221



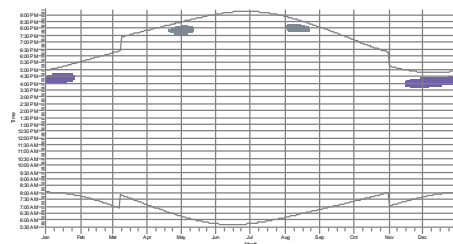
H222: H222



H224: H224



H225: H225



WTGs

38: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1485)

43: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1488)

44: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1489)

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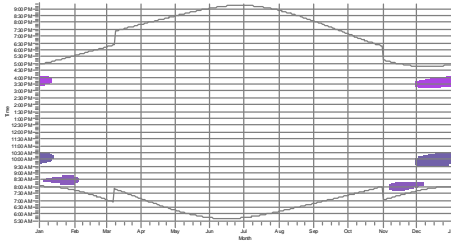
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Calculated:
6/24/2016 3:33 PM/3.0.654

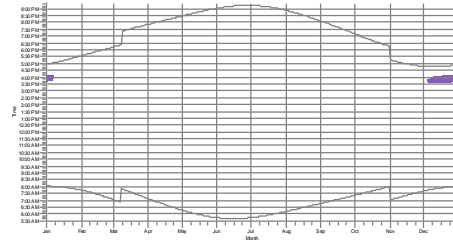
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

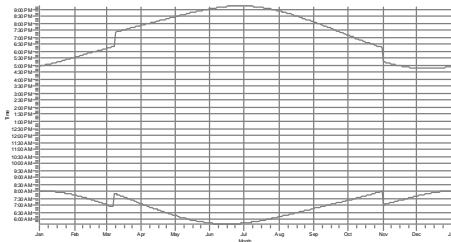
H226: H226



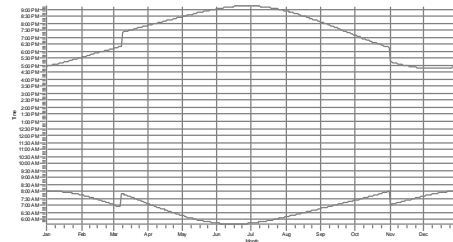
H227: H227



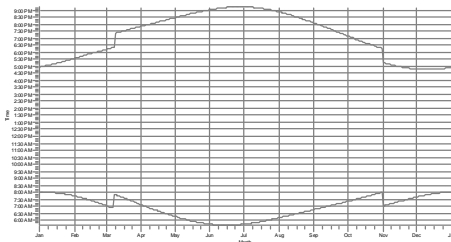
H228: H228



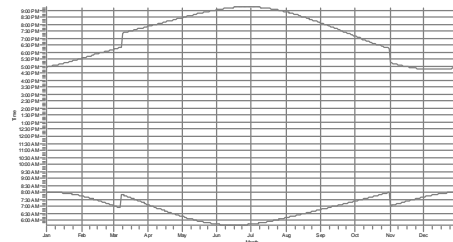
H230: H230



H233: H233



H248: H248



WTGs

43: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1468)

44: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1489)

45: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1457)

Project:

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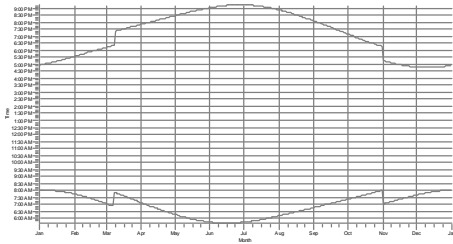
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Calculated:
6/24/2016 3:33 PM/3.0.654

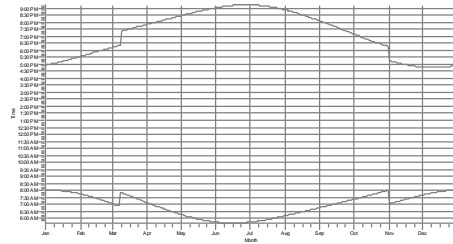
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

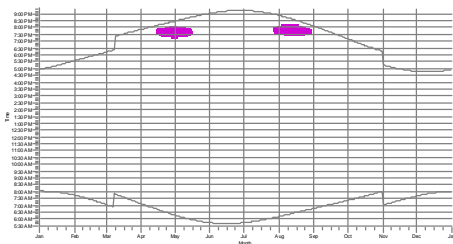
H249: H249



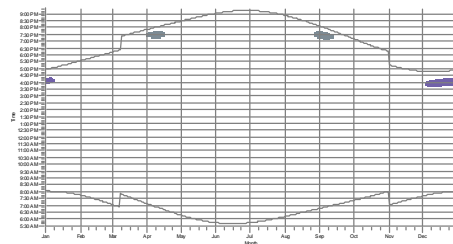
H250: H250



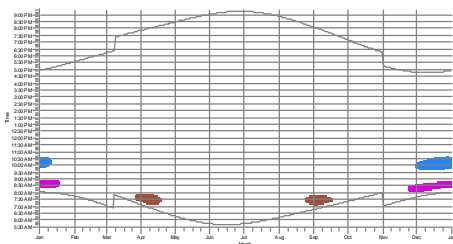
H251: H251



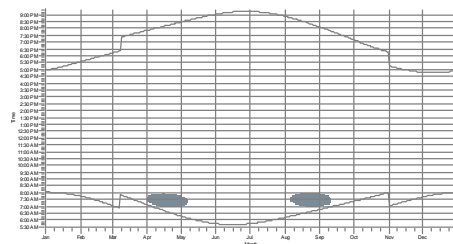
H252: H252



H253: H253



H254: H254



WTGs

- 38: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1485)
- 40: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1478)
- 44: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1489)
- 39: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1515)
- 41: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1461)

Project:

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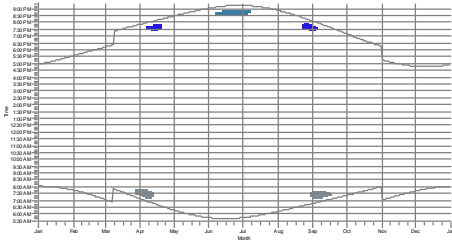
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Jay Haley / jhaley@eapc.net
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6/24/2016 3:33 PM/3.0.654

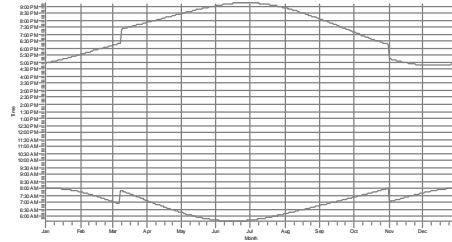
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

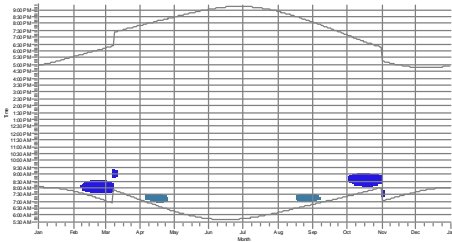
H255: H255



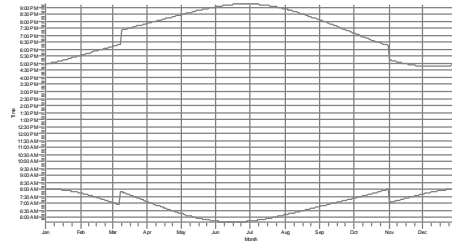
H257: H257



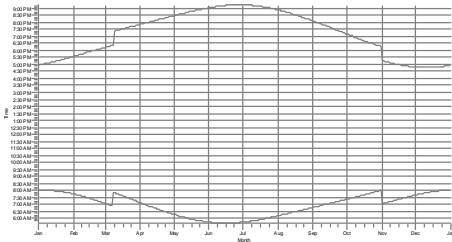
H258: H258



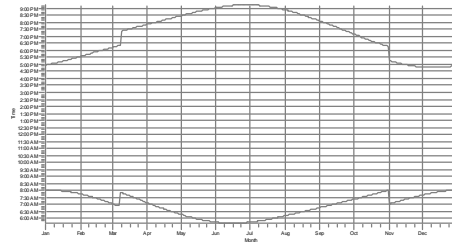
H259: H259



H260: H260



H261: H261



WTGs

36: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1459)

37: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1479)

38: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1485)

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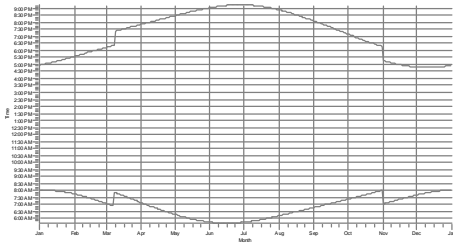
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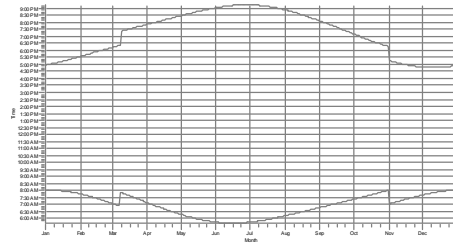
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

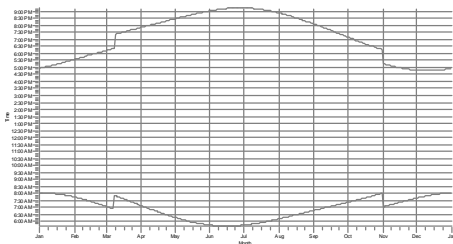
H262: H262



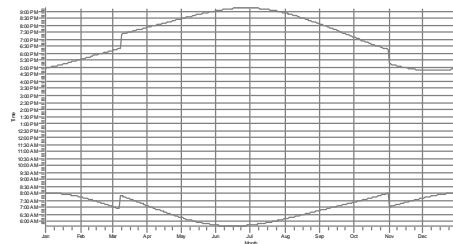
H278: H278



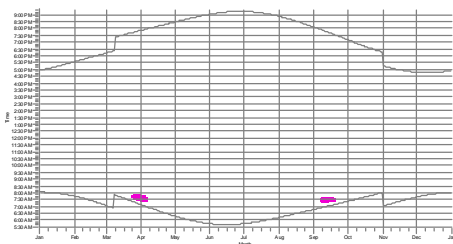
H279: H279



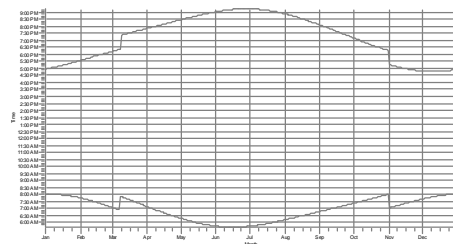
H280: H280



H281: H281



H282: H282



WTGs

24: VESTAS V126-3.3 3300 126.0 I0I hub: 87.0 m (TOT: 150.0 m) (1487)

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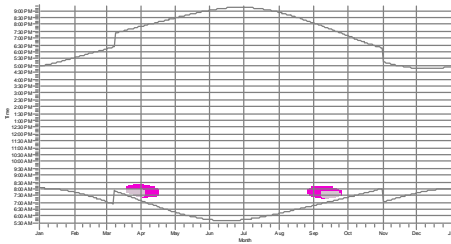
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Calculated:
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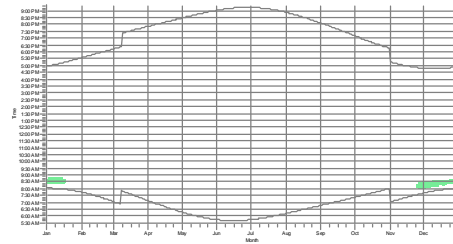
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

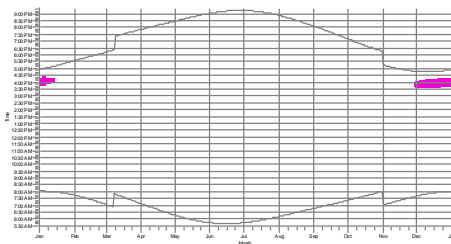
H283: H283



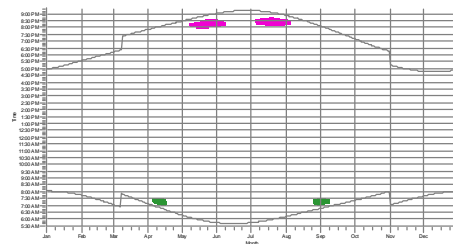
H284: H284



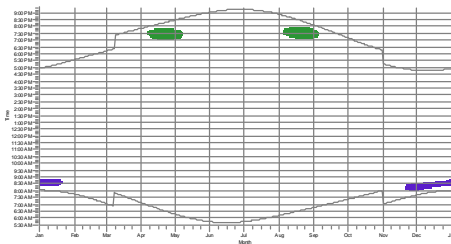
H285: H285



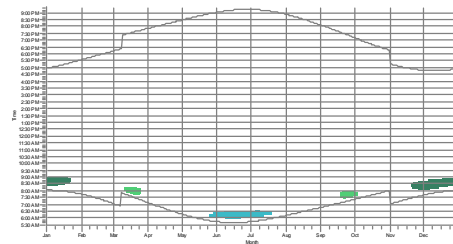
H286: H286



H287: H287



H288: H288



WTGs

- 19: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1465)
- 24: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1487)
- 25: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1477)
- 26: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1447)
- 27: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1460)
- 28: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1513)
- 29: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1483)
- 42: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1474)

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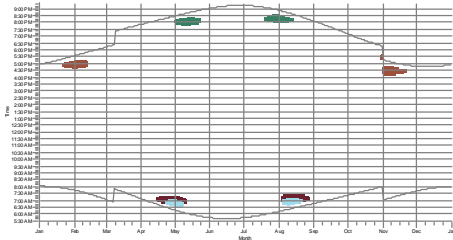
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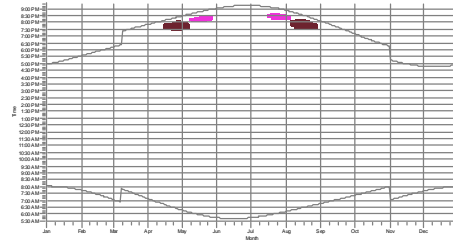
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

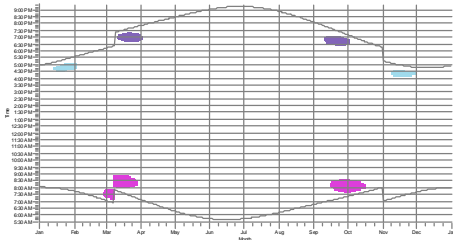
H289: H289



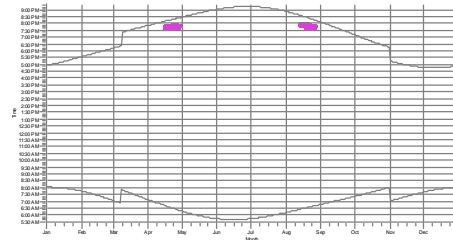
H292: H292



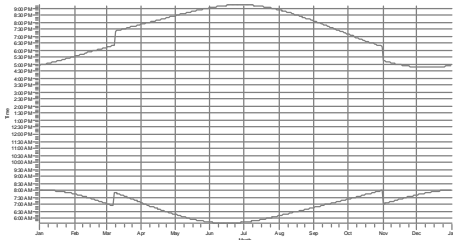
H293: H293



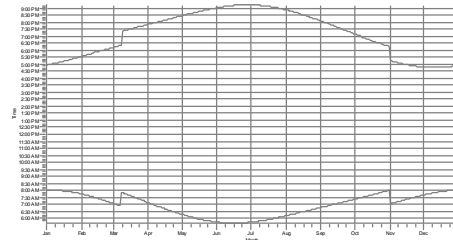
H294: H294



H295: H295



H296: H296



WTGs

- 29: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1483)
- 32: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1476)
- 34: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1480)
- 40: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1478)
- 31: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1514)
- 33: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1466)
- 35: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1507)

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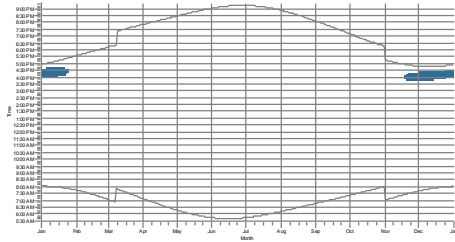
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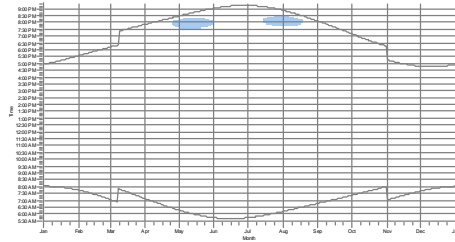
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

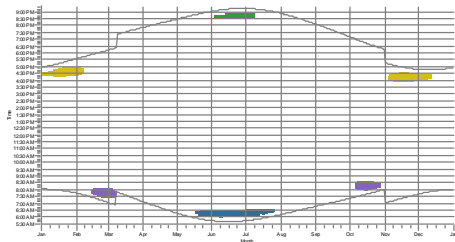
H297: H297



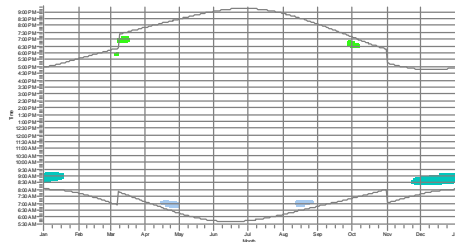
H299: H299



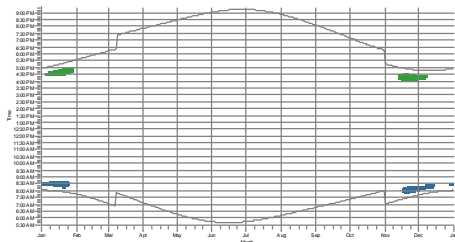
H300: H300



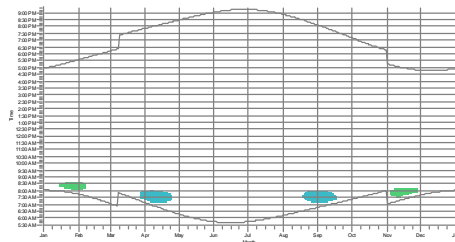
H301: H301












H302: H302



H303: H303



WTGs

- | | | |
|--|--|--|
|  15: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1505) |  20: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1491) |  28: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1513) |
|  18: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1497) |  21: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1503) |  30: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1473) |
|  19: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1465) |  22: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1502) |  34: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1480) |

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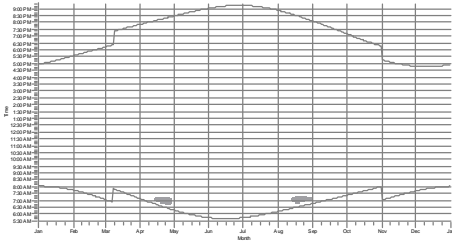
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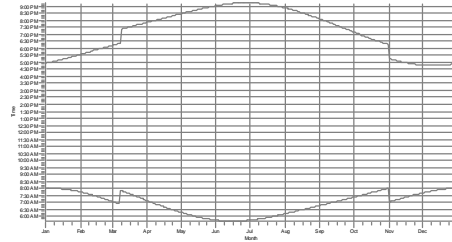
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

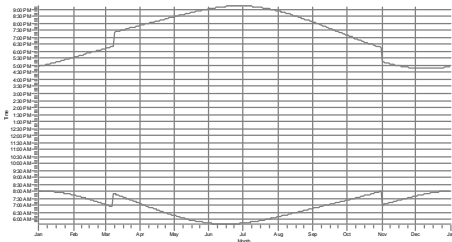
H305: H305



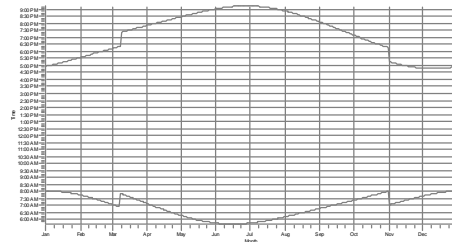
H307: H307



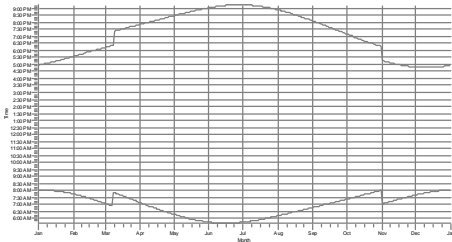
H308: H308



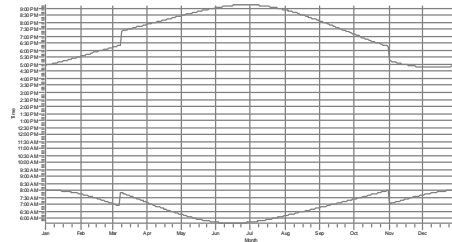
H309: H309



H310: H310



H311: H311



WTGs

16: VESTAS V126-3.3 3300 126.0 I01 hub: 87.0 m (TOT: 150.0 m) (1469)

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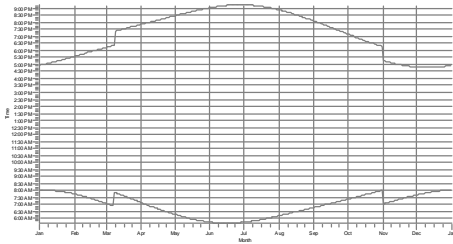
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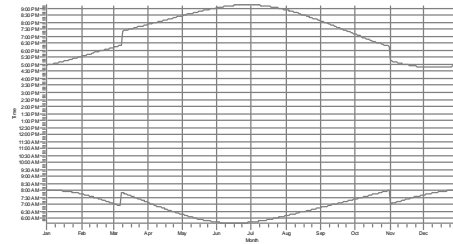
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

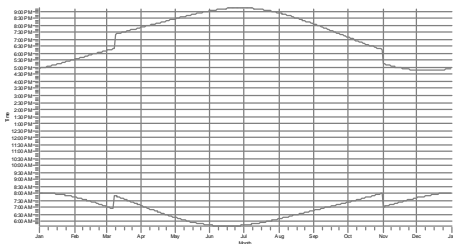
H312: H312



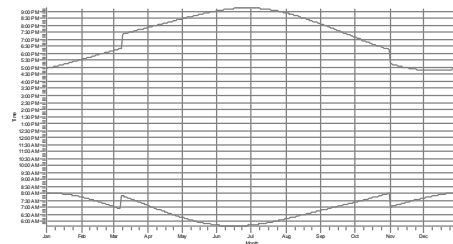
H313: H313



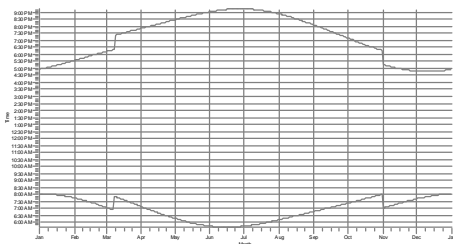
H314: H314



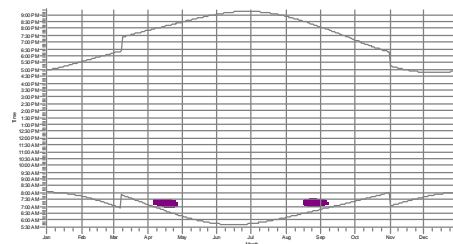
H315: H315



H316: H316



H317: H317



WTGs

11: VESTAS V126-3.3 3300 126.0 IOfI hub: 87.0 m (TOT: 150.0 m) (1511)

Project:

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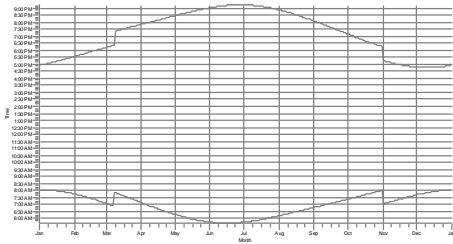
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6/24/2016 3:33 PM/3.0.654

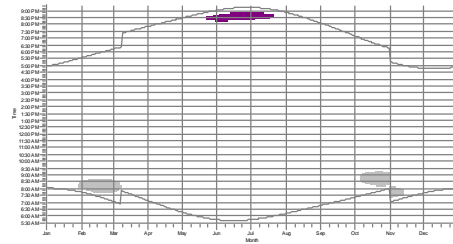
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

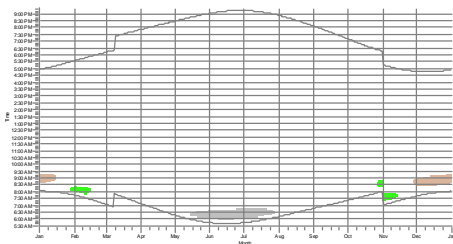
H318: H318



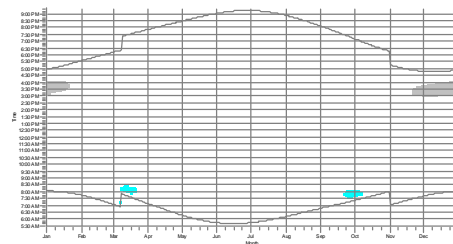
H319: H319



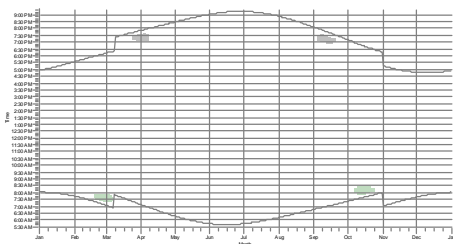
H320: H320



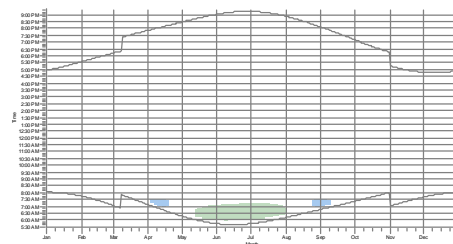
H321: H321



H322: H322



H323: H323



WTGs

- 11: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1511)
- 13: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1498)
- 15: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1505)
- 18: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1497)
- 12: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1512)
- 14: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1493)
- 17: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1492)

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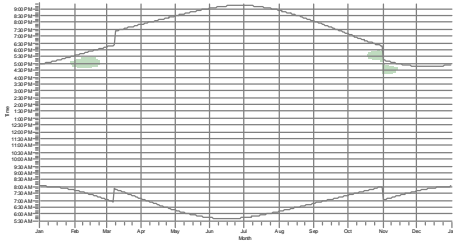
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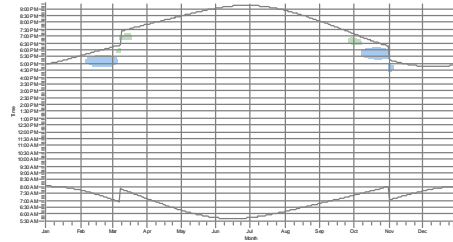
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

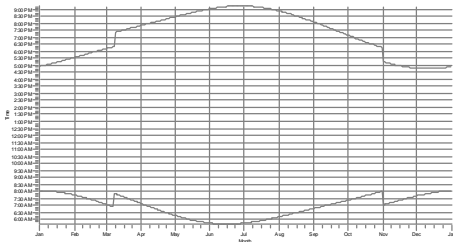
H324: H324



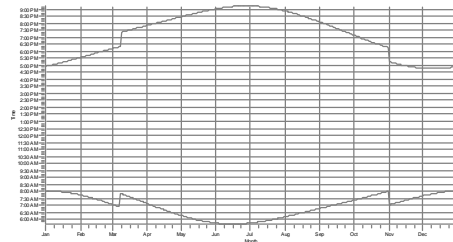
H325: H325



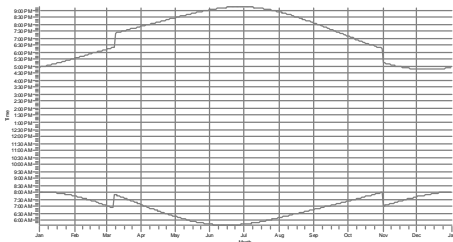
H326: H326



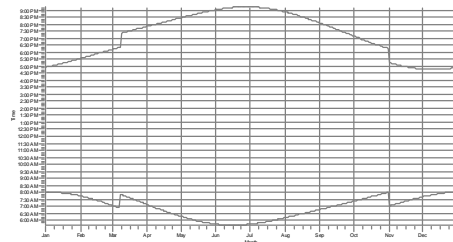
H327: H327



H328: H328



H330: H330



WTGs

14: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1493)

15: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1505)

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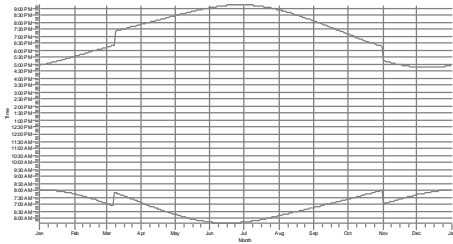
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Calculated:
6/24/2016 3:33 PM/3.0.654

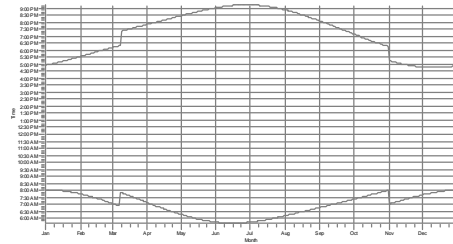
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

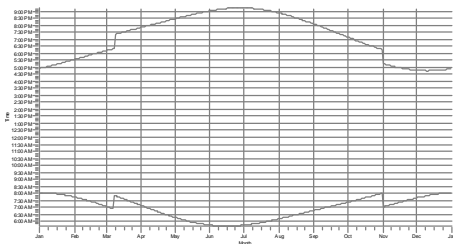
H331: H331



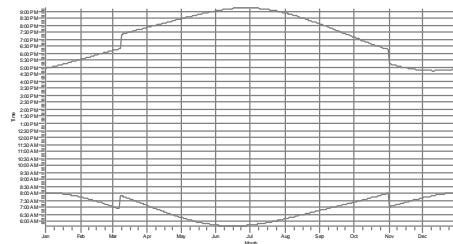
H334: H334



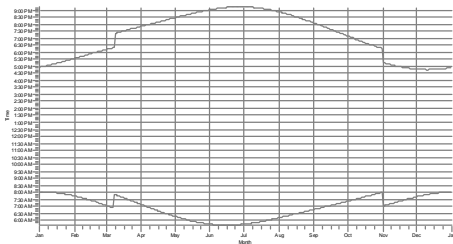
H335: H335



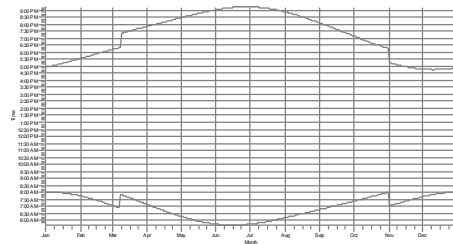
H336: H336



H337: H337



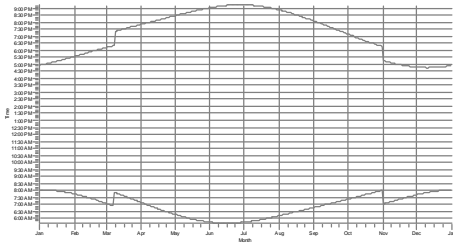
H338: H338



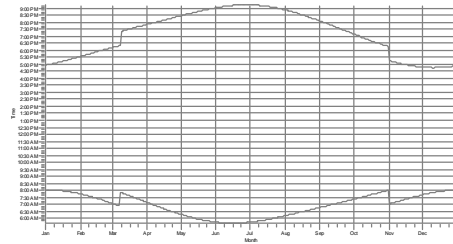
WTGs

SHADOW - Calendar, graphical
 Calculation: V126-3.3 87m HH v25

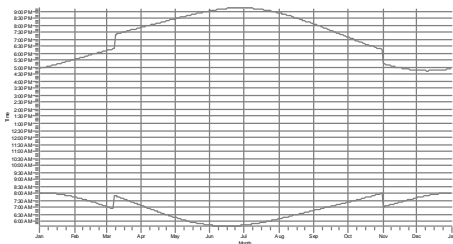
H339: H339



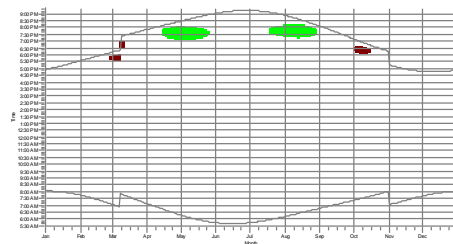
H340: H340



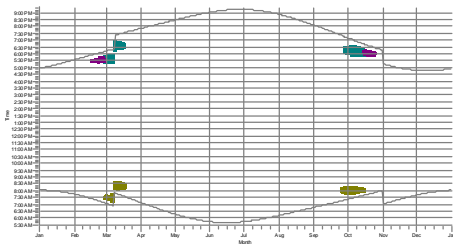
H341: H341



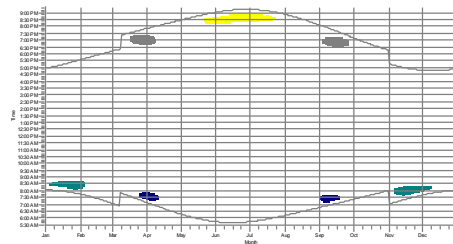
H342: H342



H343: H343



H345: H345

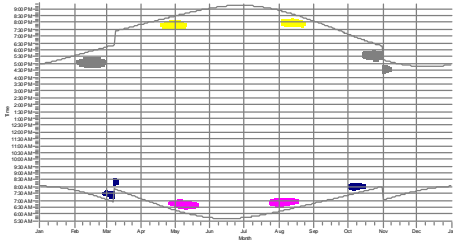


WTGs

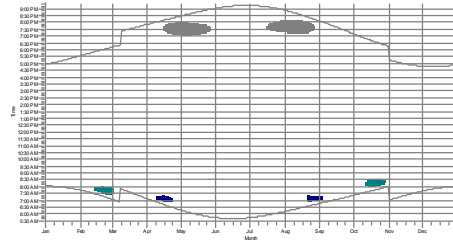
- 2: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1471)
- 4: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1508)
- 6: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1509)
- 7: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1510)
- 8: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1506)
- 9: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1494)
- 10: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1500)
- 11: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1511)

SHADOW - Calendar, graphical
 Calculation: V126-3.3 87m HH v25

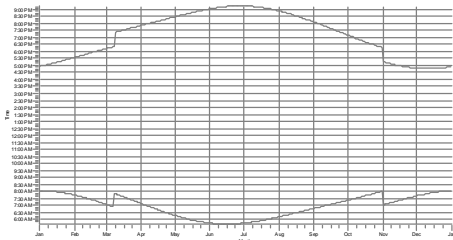
H346: H346



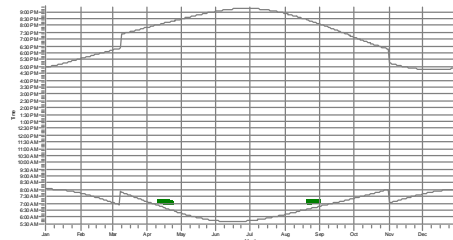
H347: H347



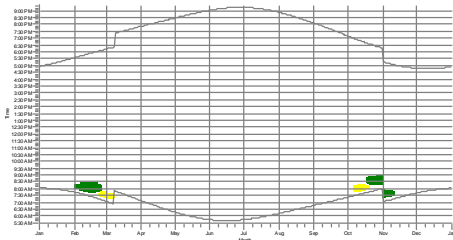
H348: H348



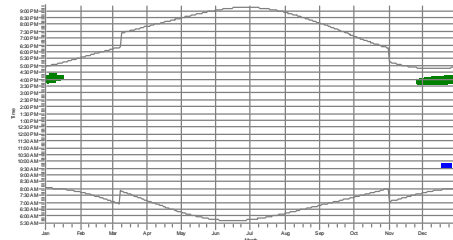
H349: H349





H350: H350



H351: H351



WTGs

- | | | | |
|---|---|---|---|
|  1: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1504) |  3: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1496) |  5: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1472) |  7: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1510) |
|  2: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1471) |  4: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1508) |  6: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1509) | |

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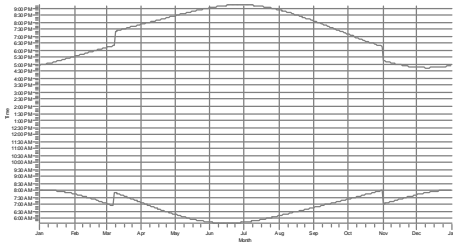
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6/24/2016 3:33 PM/3.0.654

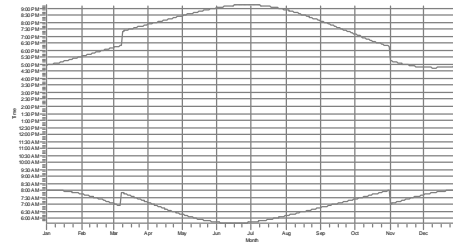
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

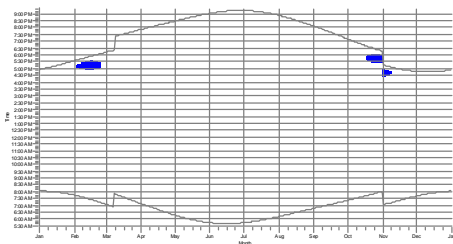
H352: H352



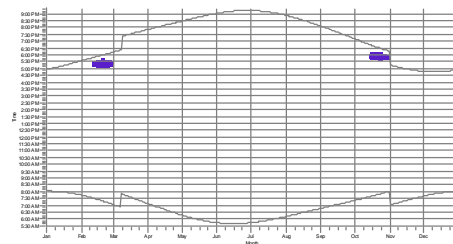
H353: H353



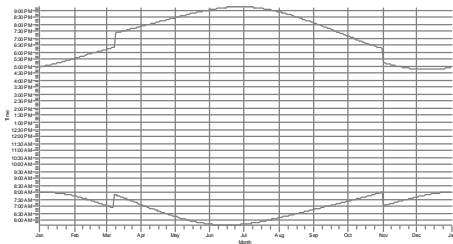
H354: H354



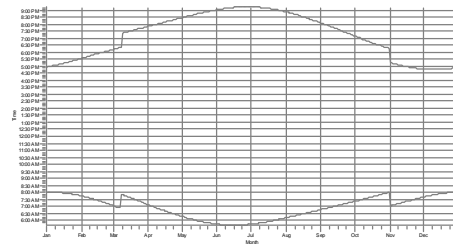
H355: H355



H356: H356



H357: H357



WTGs

3: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1496)

42: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1474)

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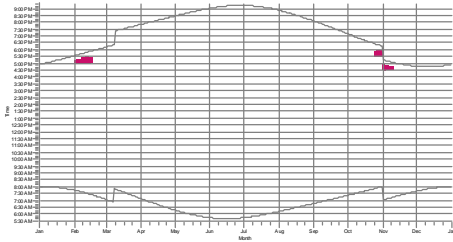
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6/24/2016 3:33 PM/3.0.654

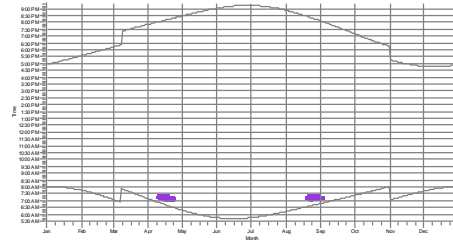
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

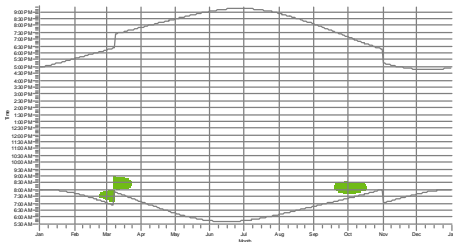
H358: H358



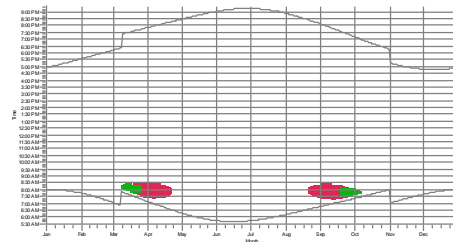
H359: H359



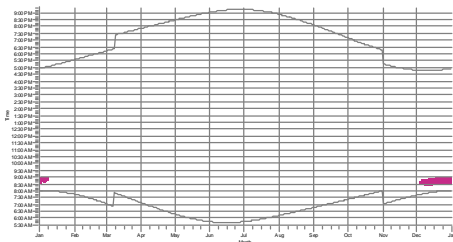
H360: H360



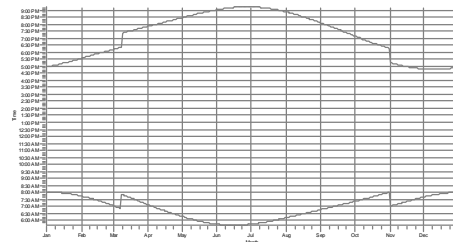
H361: H361



H362: H362



H363: H363



WTGs

- 46: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1490)
- 52: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1484)
- 54: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1463)
- 50: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1464)
- 53: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1488)
- 57: VESTAS V126-3.3 3300 126.0 IOI hub: 87.0 m (TOT: 150.0 m) (1499)

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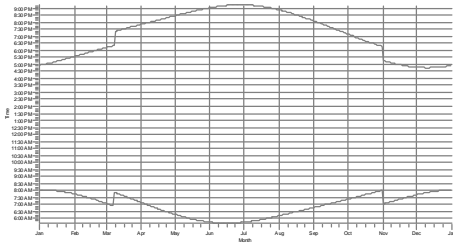
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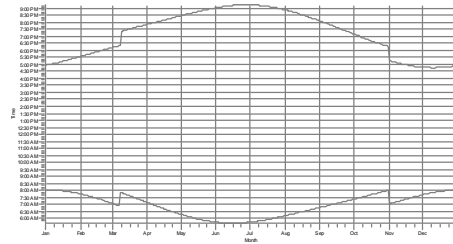
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

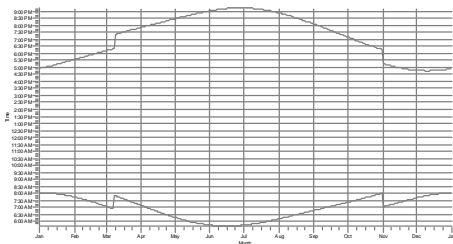
H364: H364



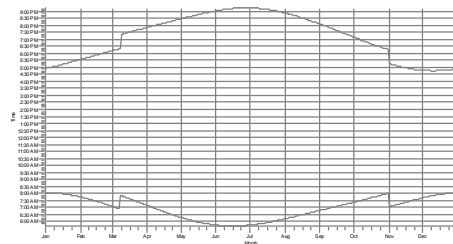
H365: H365



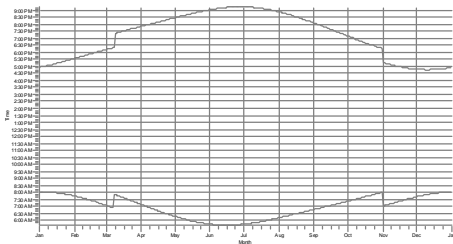
H366: H366



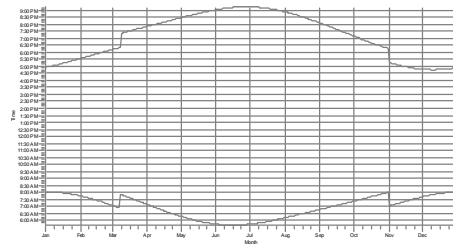
H367: H367



H368: H368



H369: H369



WTGs

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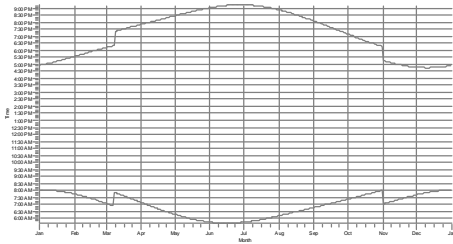
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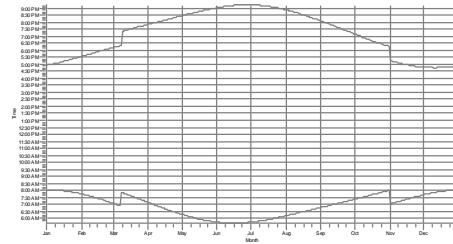
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

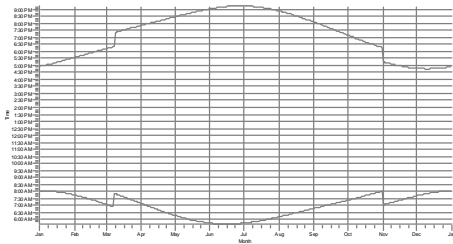
H370: H370



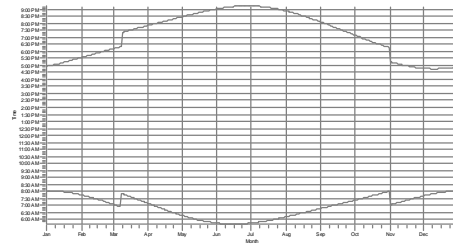
H371: H371



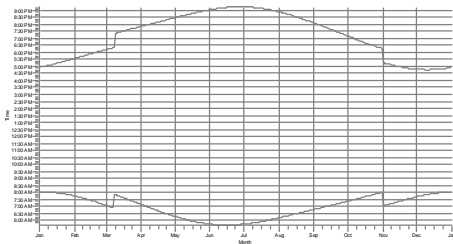
H372: H372



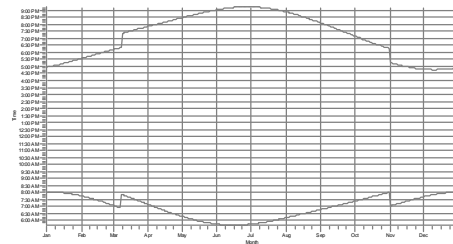
H373: H373



H374: H374



H375: H375



WTGs

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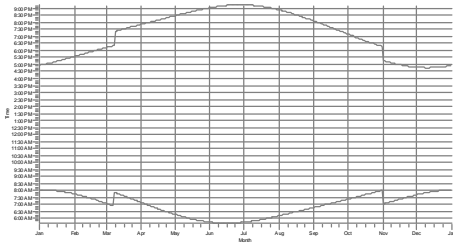
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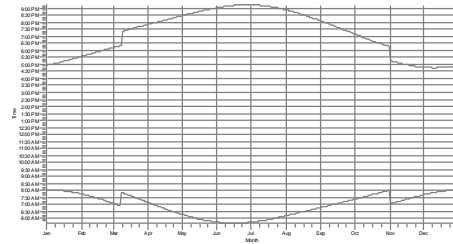
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

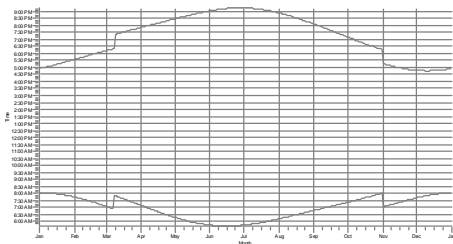
H376: H376



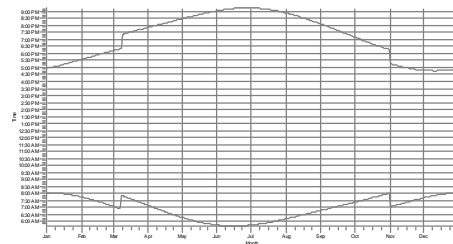
H377: H377



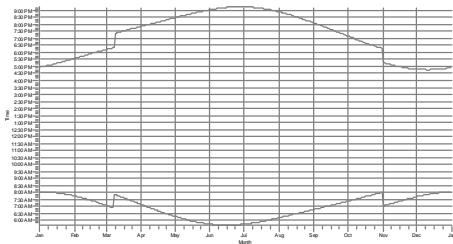
H378: H378



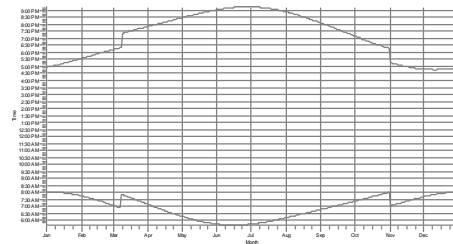
H379: H379



H380: H380



H381: H381



WTGs

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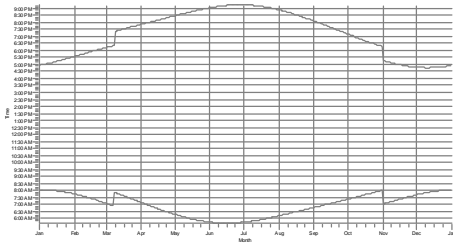
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6/24/2016 3:33 PM/3.0.654

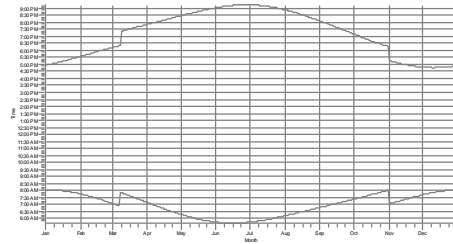
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

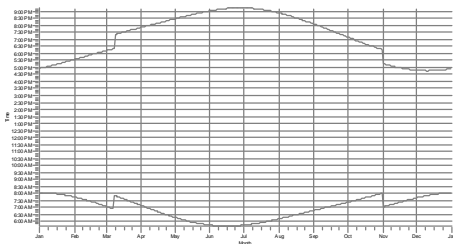
H382: H382



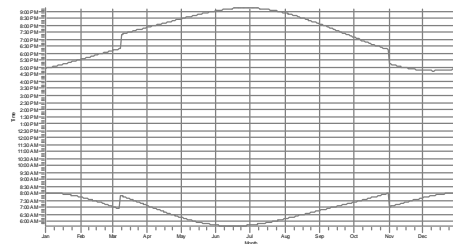
H383: H383



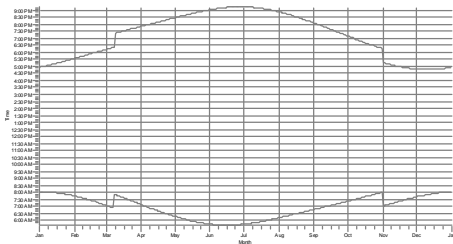
H384: H384



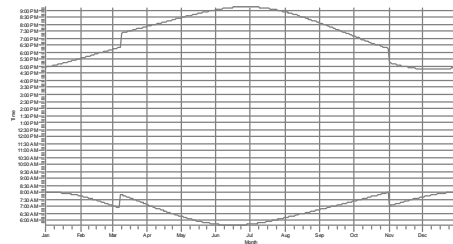
H385: H385



H386: H386



H387: H387



WTGs

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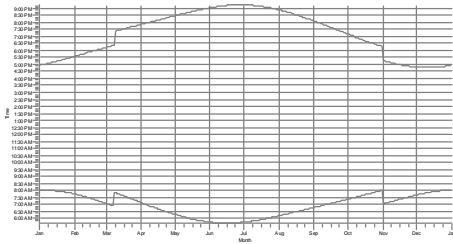
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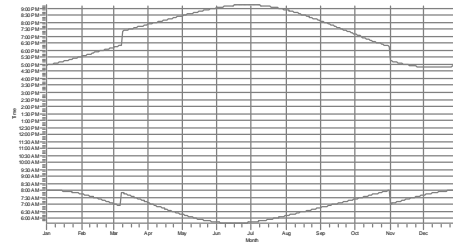
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

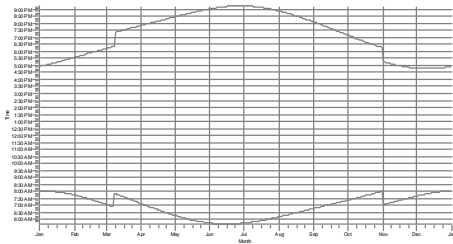
H388: H388



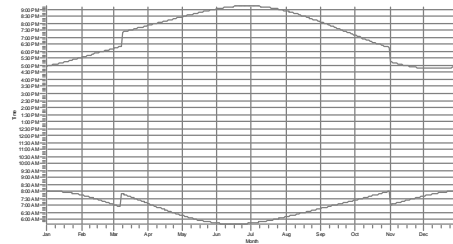
H389: H389



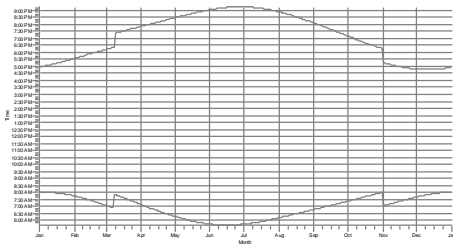
H390: H390



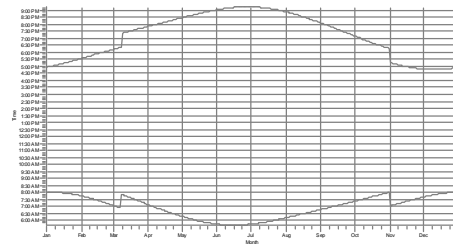
H391: H391



H392: H392



H393: H393



WTGs

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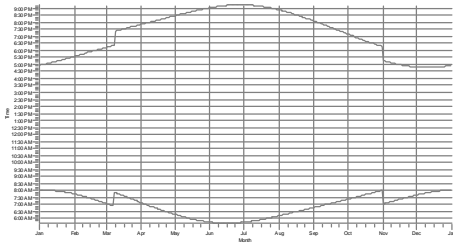
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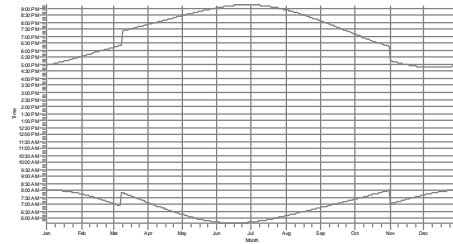
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

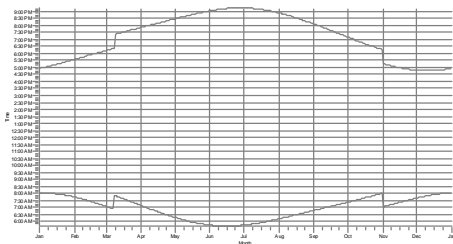
H394: H394



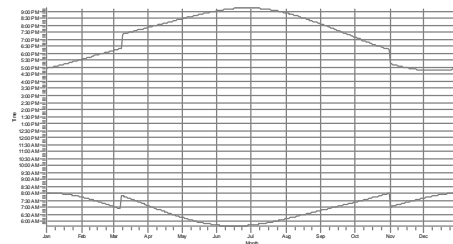
H395: H395



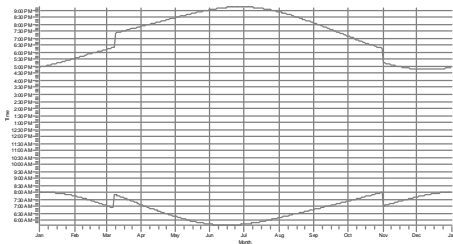
H396: H396



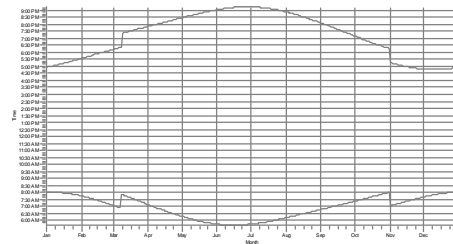
H397: H397



H398: H398



H399: H399



WTGs

Project:

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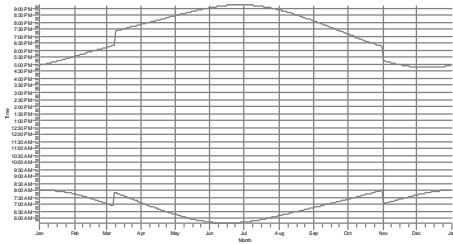
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Calculated:
6/24/2016 3:33 PM/3.0.654

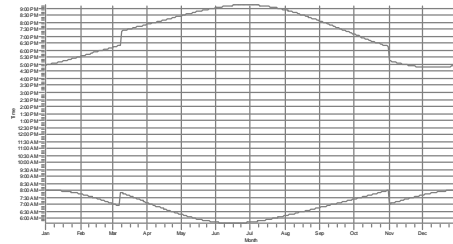
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

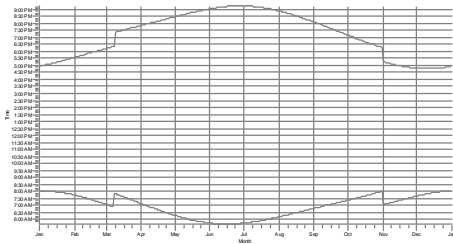
H400: H400



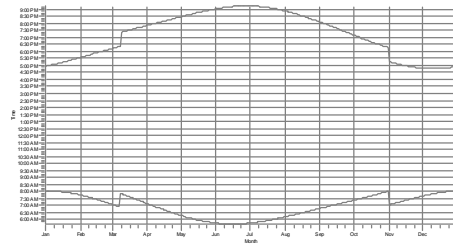
H401: H401



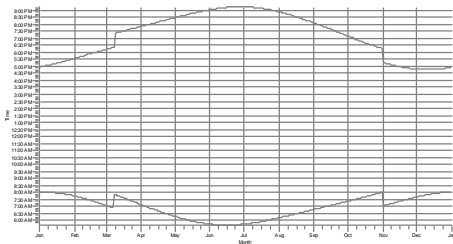
H402: H402



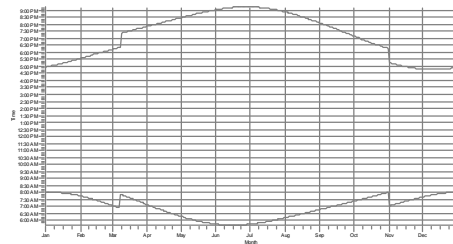
H403: H403



H404: H404



H405: H405



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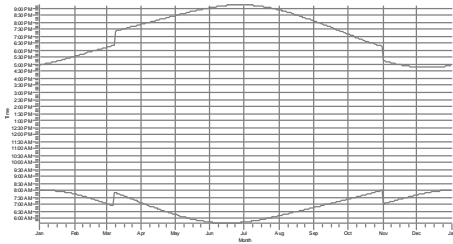
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Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

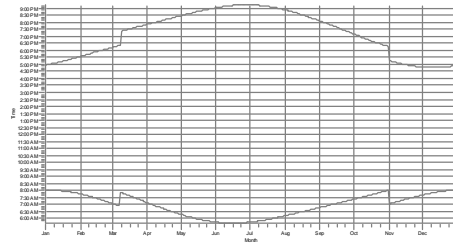
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

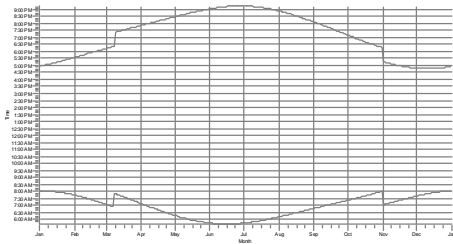
H406: H406



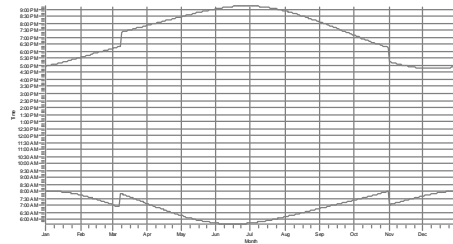
H407: H407



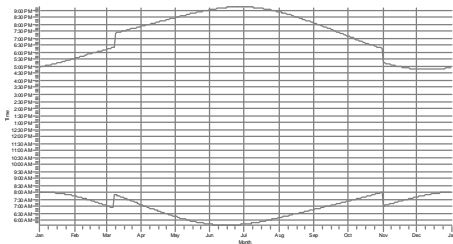
H408: H408



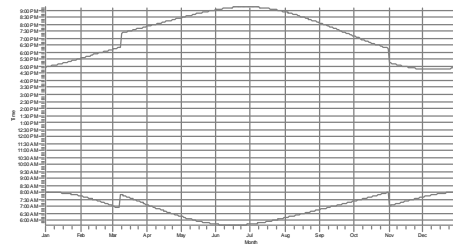
H409: H409



H410: H410



H411: H411



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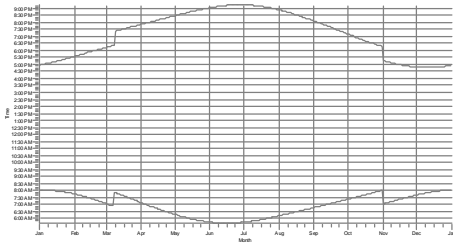
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6/24/2016 3:33 PM/3.0.654

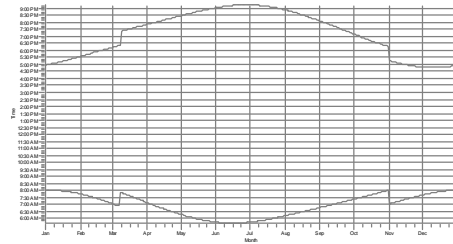
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

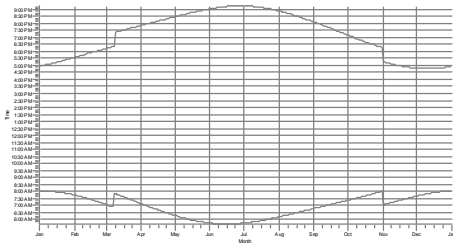
H412: H412



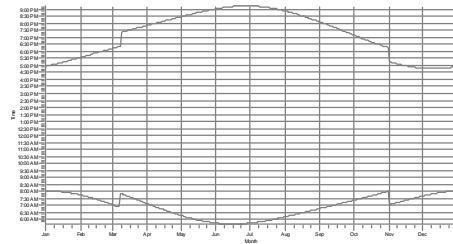
H413: H413



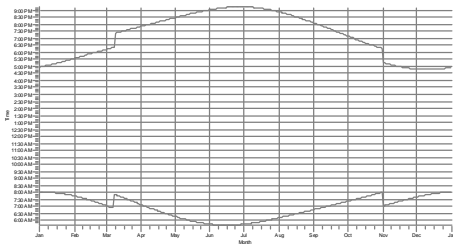
H414: H414



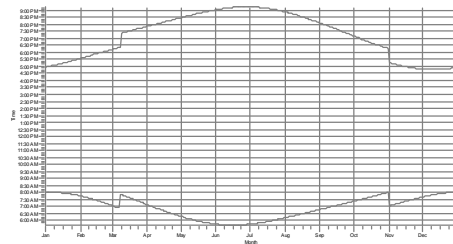
H415: H415



H416: H416



H417: H417



WTGs

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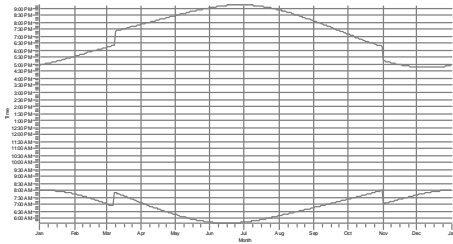
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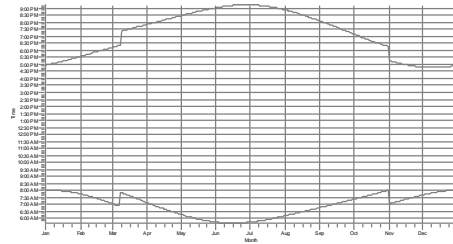
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

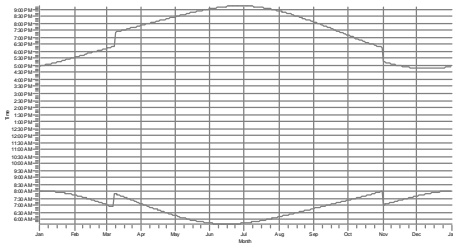
H418: H418



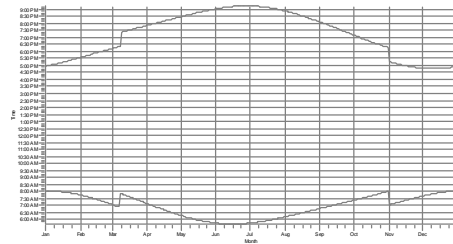
H419: H419



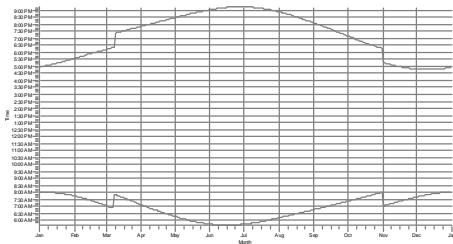
H420: H420



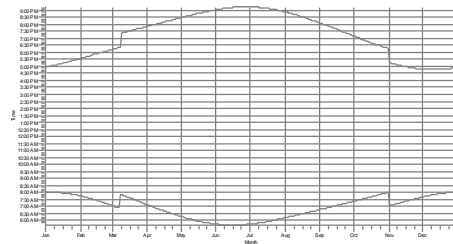
H421: H421



H422: H422



H423: H423



WTGs

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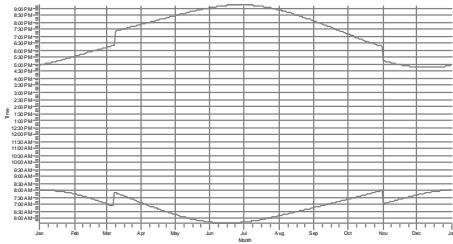
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Calculated:
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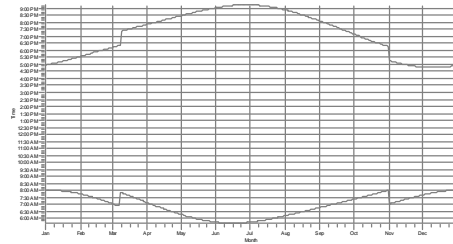
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

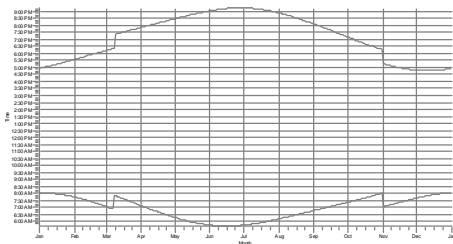
H424: H424



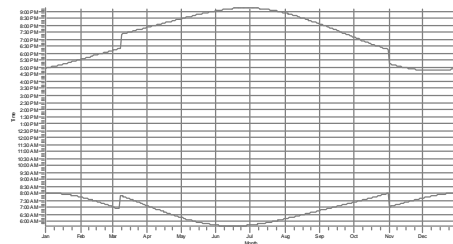
H425: H425



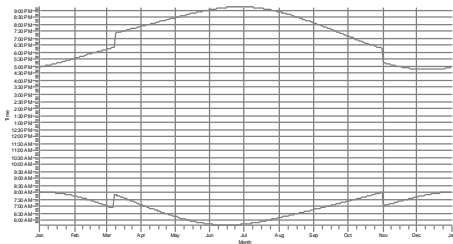
H426: H426



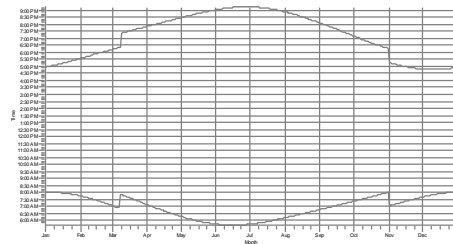
H427: H427



H428: H428



H429: H429



WTGs

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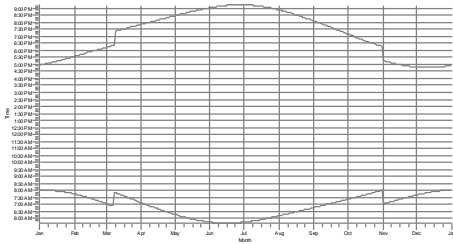
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Calculated:
6/24/2016 3:33 PM/3.0.654

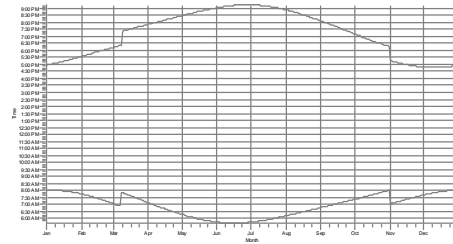
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

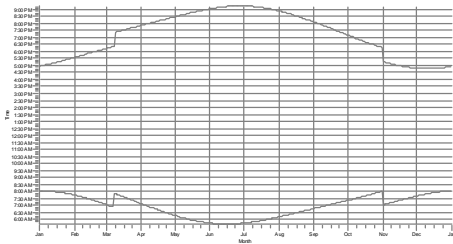
H430: H430



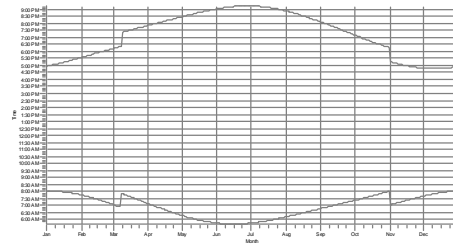
H431: H431



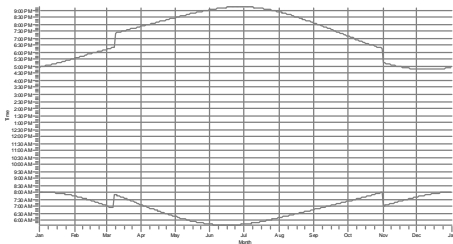
H432: H432



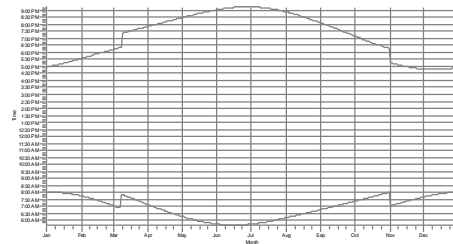
H433: H433



H434: H434



H435: H435



WTGs

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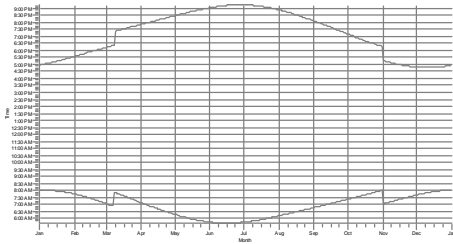
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Calculated:
6/24/2016 3:33 PM/3.0.654

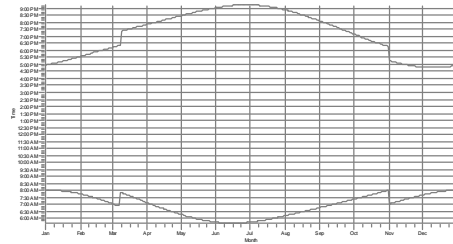
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

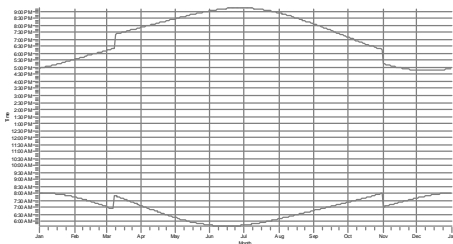
H436: H436



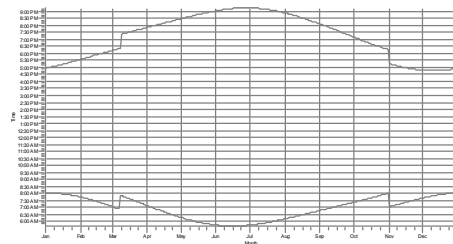
H437: H437



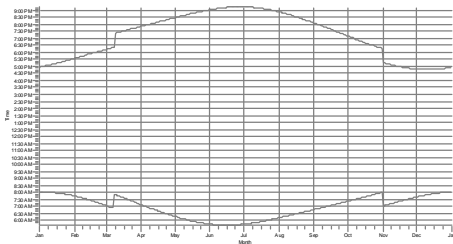
H438: H438



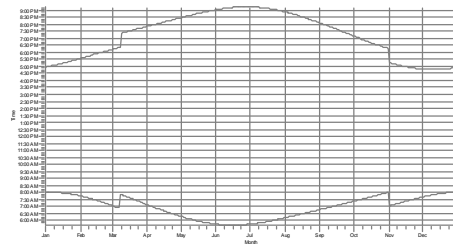
H439: H439



H440: H440



H441: H441



WTGs

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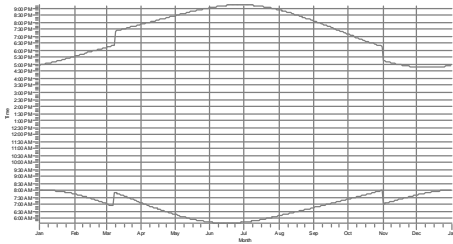
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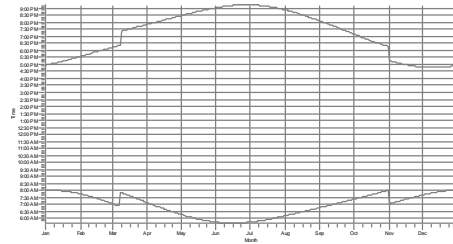
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

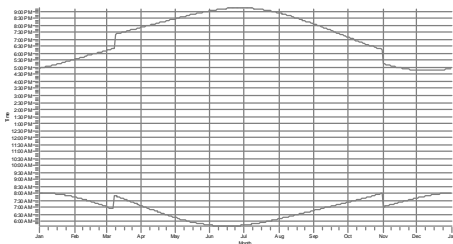
H442: H442



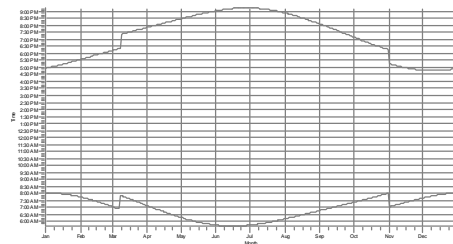
H443: H443



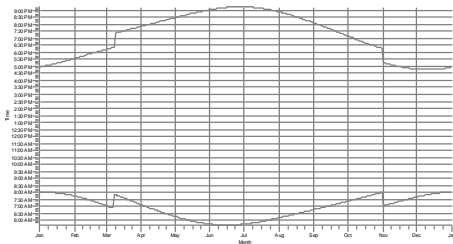
H444: H444



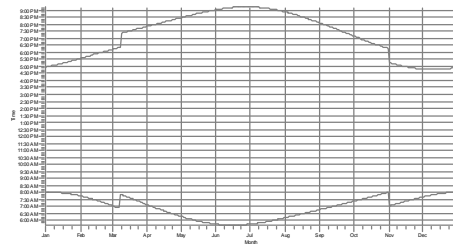
H445: H445



H446: H446



H447: H447



WTGs

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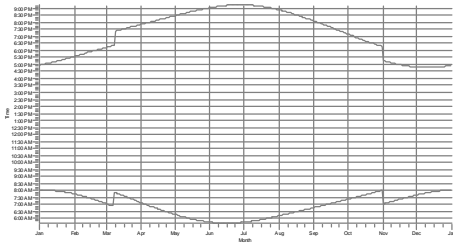
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Calculated:
6/24/2016 3:33 PM/3.0.654

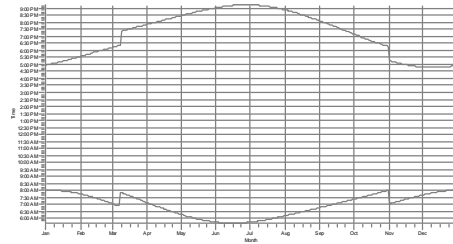
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

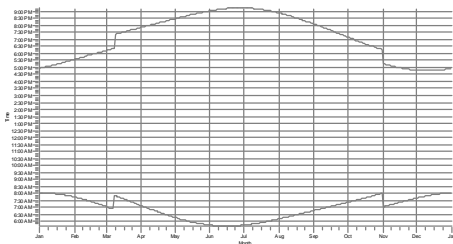
H448: H448



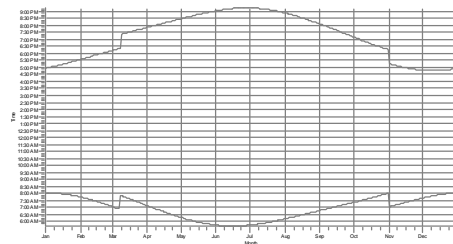
H449: H449



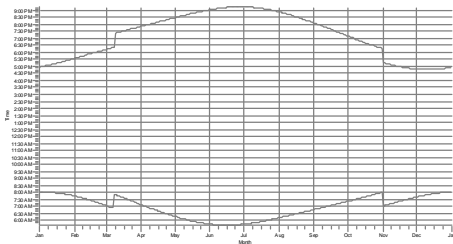
H450: H450



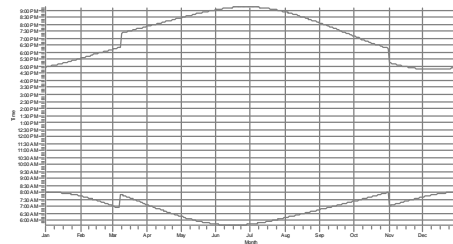
H451: H451



H452: H452



H453: H453



WTGs

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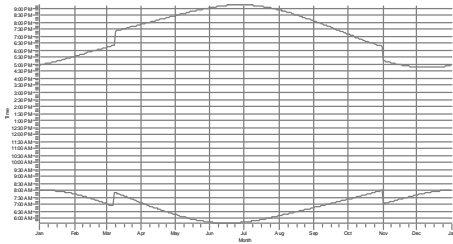
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Calculated:
6/24/2016 3:33 PM/3.0.654

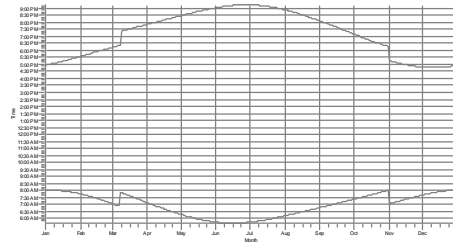
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

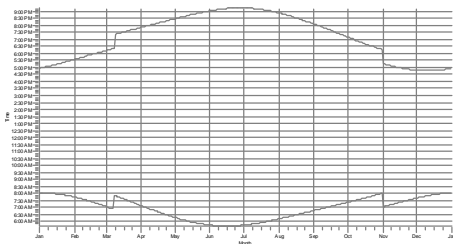
H454: H454



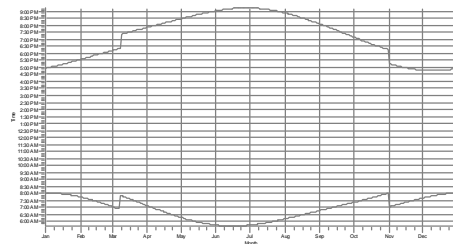
H455: H455



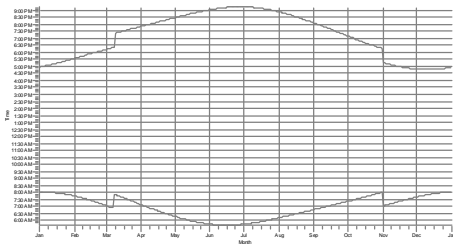
H456: H456



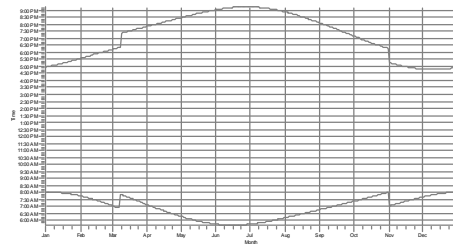
H457: H457



H458: H458



H459: H459



WTGs

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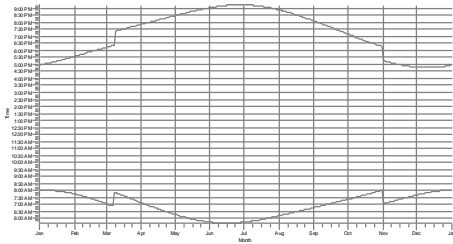
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Calculated:
6/24/2016 3:33 PM/3.0.654

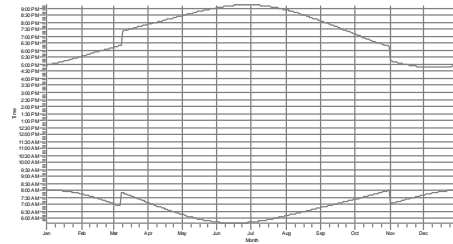
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

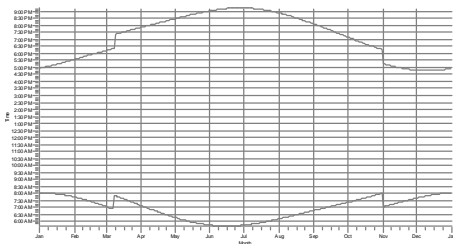
H460: H460



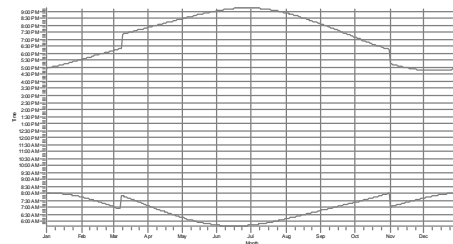
H461: H461



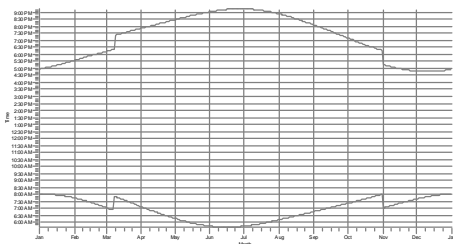
H462: H462



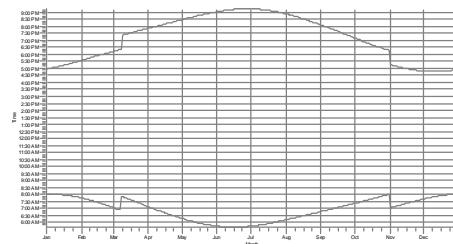
H463: H463



H464: H464



H465: H465



WTGs

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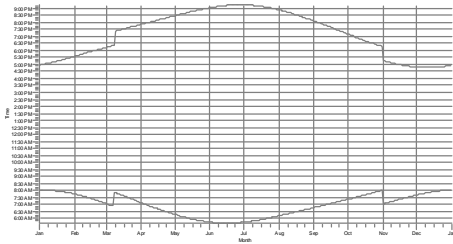
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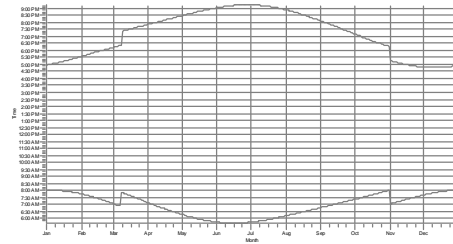
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

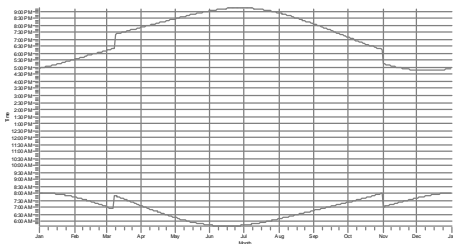
H466: H466



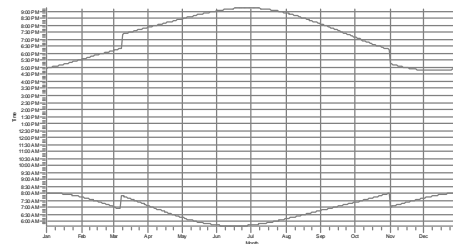
H467: H467



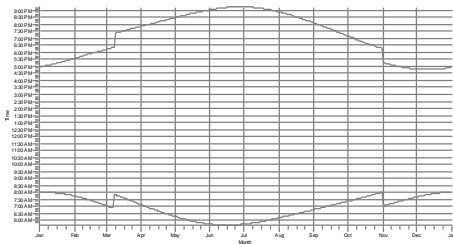
H468: H468



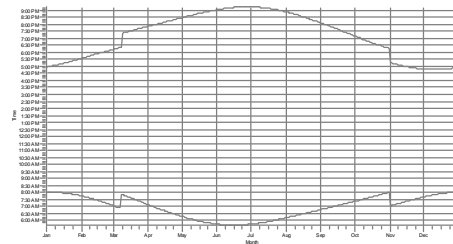
H469: H469



H470: H470



H471: H471



WTGs

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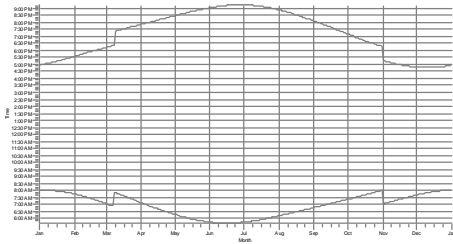
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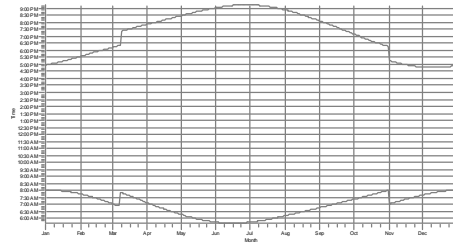
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

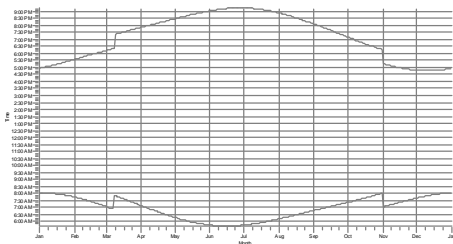
H472: H472



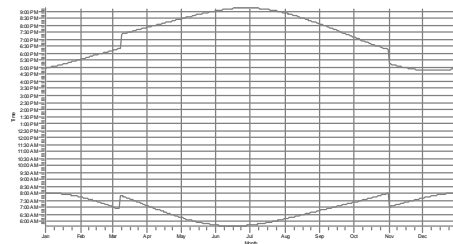
H473: H473



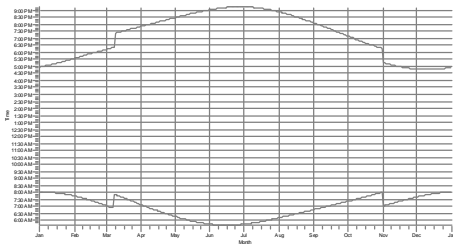
H474: H474



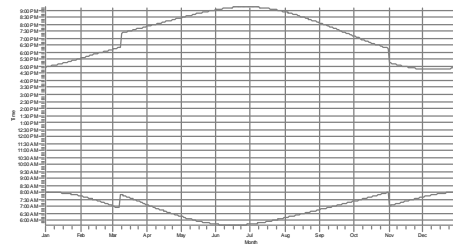
H475: H475



H476: H476



H477: H477



WTGs

Project:

20162030 Westwood Red Pine

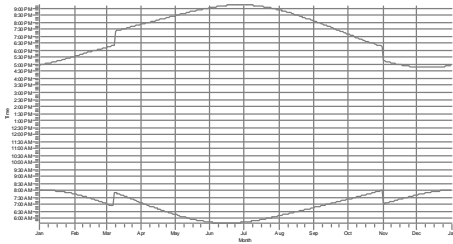
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

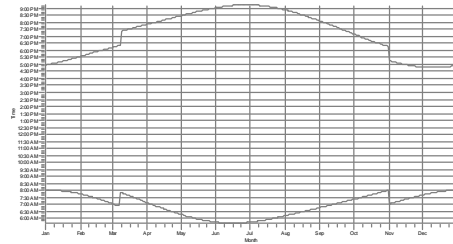
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

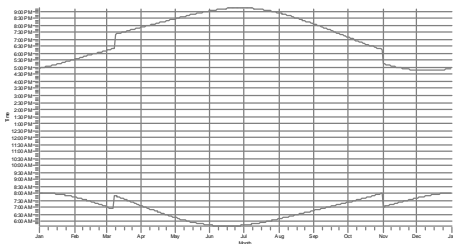
H478: H478



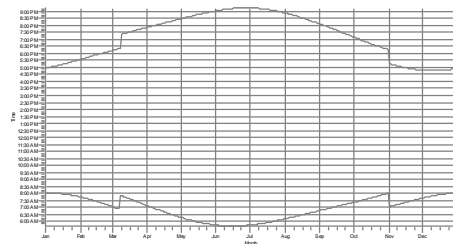
H479: H479



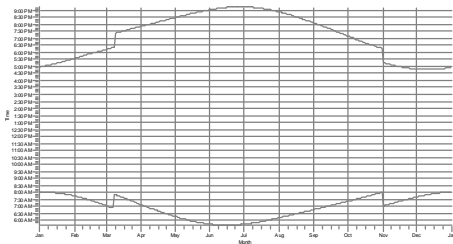
H480: H480



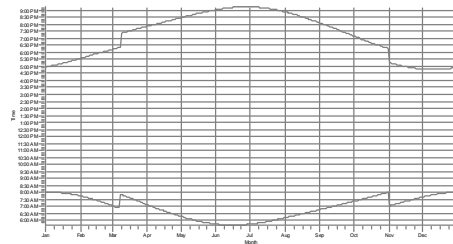
H481: H481



H482: H482



H483: H483



WTGs

Project:

20162030 Westwood Red Pine

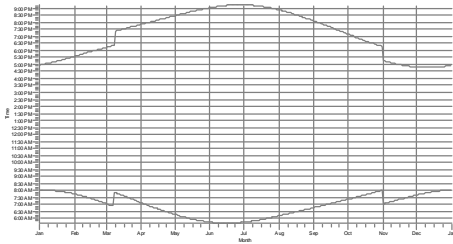
Licensed user:

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US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

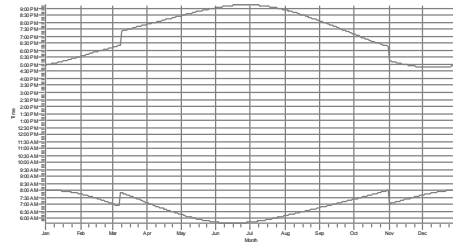
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

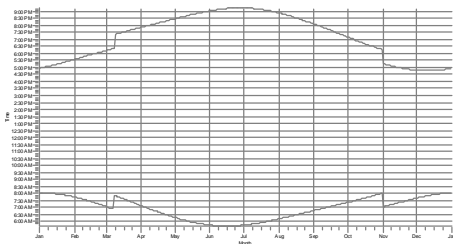
H484: H484



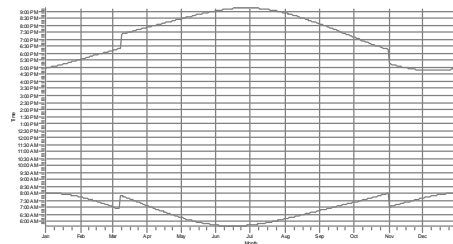
H485: H485



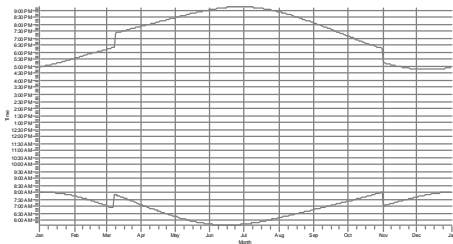
H486: H486



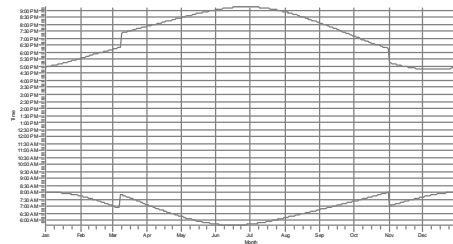
H487: H487



H488: H488



H489: H489



WTGs

Project:

20162030 Westwood Red Pine

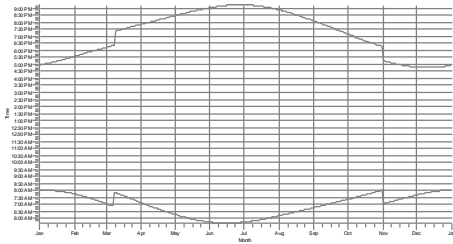
Licensed user:

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Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

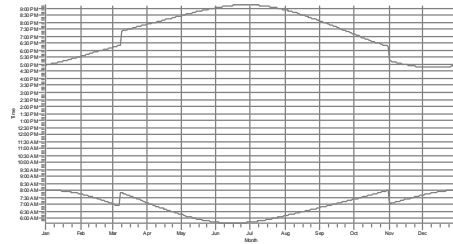
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

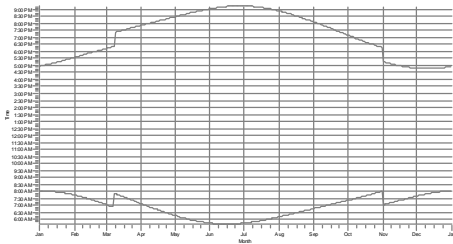
H490: H490



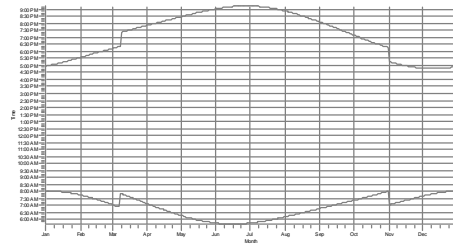
H491: H491



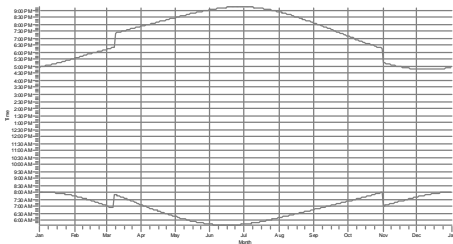
H492: H492



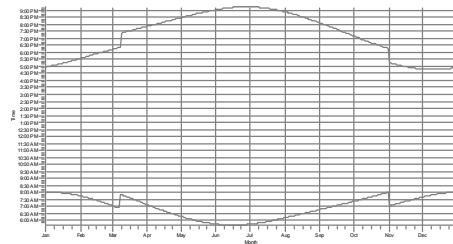
H493: H493



H494: H494



H495: H495



WTGs

Project:

20162030 Westwood Red Pine

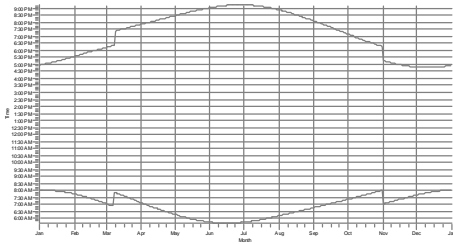
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/24/2016 3:33 PM/3.0.654

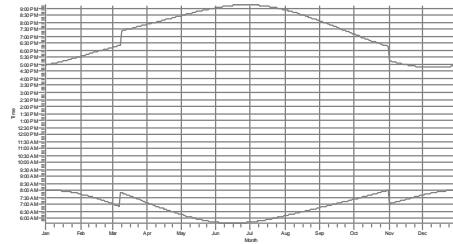
SHADOW - Calendar, graphical

Calculation: V126-3.3 87m HH v25

H496: H496



H497: H497



WTGs

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

Assumptions for shadow calculations

Maximum distance for influence	1,500 m
Minimum sun height over horizon for influence	3 °
Day step for calculation	1 days
Time step for calculation	1 minutes

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational hours are calculated from WTGs in calculation and wind distribution:

2314 Provided

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:

Height contours used: Height Contours: 160310_Westwood_RedPine_10ftHCLsFr

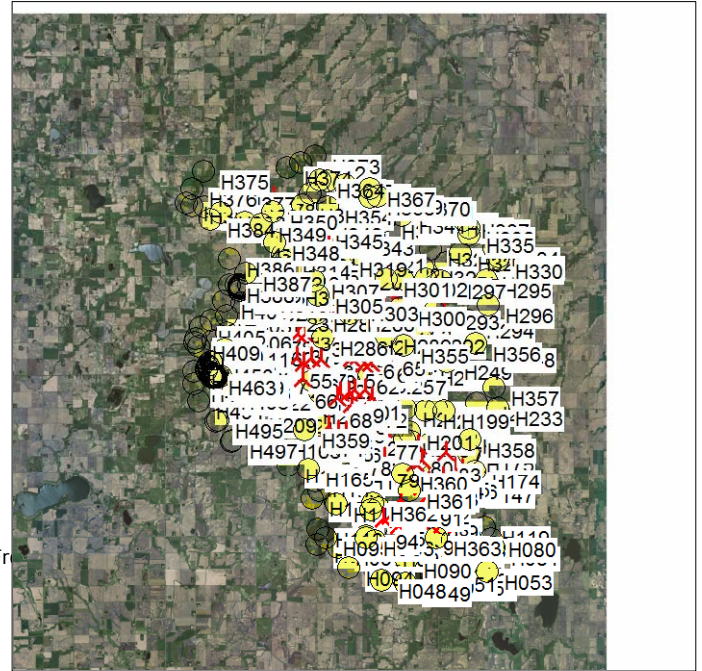
Obstacles used in calculation

Eye height: 1.5 m

Grid resolution: 10.0 m

All coordinates are in

UTM (north)-NAD83 (US+CA) Zone: 14



Scale 1:400,000
 ▲ New WTG ● Shadow receptor

WTGs

	Easting	Northing	Z [m]	Row data/Description	WTG type		Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]
					Valid	Manufact.				
1	721,230	4,935,111	481.6	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
2	721,714	4,935,515	493.8	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
3	722,084	4,935,186	493.3	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
4	720,974	4,933,745	482.9	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
5	721,438	4,933,716	482.1	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
6	722,331	4,934,405	487.7	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
7	722,842	4,934,475	490.7	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
8	723,524	4,934,710	475.5	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
9	723,109	4,933,855	491.7	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
10	723,427	4,934,013	493.8	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
11	725,050	4,934,650	463.3	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
12	724,671	4,933,636	472.1	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
13	725,283	4,934,028	463.3	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
14	725,950	4,934,650	458.7	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
15	726,331	4,933,668	460.2	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
16	724,527	4,932,913	476.2	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
17	725,986	4,933,168	460.8	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
18	726,784	4,933,136	456.8	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
19	725,885	4,932,431	466.3	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
20	727,550	4,932,650	460.2	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
21	727,850	4,932,750	457.2	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
22	723,047	4,931,284	499.9	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
23	722,961	4,930,393	509.0	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
24	725,078	4,931,194	480.9	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
25	725,524	4,930,719	482.5	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
26	725,876	4,931,223	478.4	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
27	726,650	4,931,000	475.5	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9
28	726,860	4,930,429	478.2	Primary	Yes	VESTAS	2,000	100.0	80.0	14.9

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

	Easting	Northing	Z [m]	Row data/Description	WTG type		Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]	
					Valid	Manufact.					Type-generator
29	727,545	4,931,205	467.4	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
30	728,054	4,931,102	466.5	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
31	728,587	4,931,088	466.3	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
32	727,771	4,930,559	469.4	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
33	729,810	4,930,865	460.2	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
34	730,400	4,930,500	454.2	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
35	723,188	4,929,457	502.7	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
36	723,708	4,929,462	494.0	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
37	723,229	4,928,751	501.9	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
38	723,634	4,928,753	497.0	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
39	724,340	4,929,175	497.9	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
40	725,081	4,929,796	482.2	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
41	725,584	4,929,091	487.7	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
42	726,488	4,929,918	484.6	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
43	727,155	4,929,840	475.8	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
44	725,933	4,929,423	486.9	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
45	726,420	4,929,134	478.6	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
46	726,084	4,928,676	493.8	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
47	727,850	4,929,600	475.5	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
48	728,344	4,929,662	475.4	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
49	728,719	4,929,830	471.1	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
50	728,528	4,928,831	473.0	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
51	728,825	4,929,054	474.7	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
52	729,161	4,929,226	474.1	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
53	729,549	4,929,995	469.4	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
54	730,950	4,930,050	454.2	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
55	723,191	4,927,547	509.0	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
56	723,575	4,927,332	508.4	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
57	723,982	4,927,567	505.1	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
58	724,500	4,927,550	499.4	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
59	726,126	4,927,676	490.7	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
60	726,472	4,927,753	496.8	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
61	727,150	4,928,200	484.6	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
62	726,810	4,927,400	494.8	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
63	727,186	4,927,456	492.8	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
64	727,861	4,928,032	484.6	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
65	728,145	4,928,361	472.7	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
66	723,552	4,926,575	499.8	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
67	725,587	4,925,936	509.0	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
68	725,407	4,925,663	510.2	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
69	726,023	4,925,949	499.5	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
70	726,362	4,926,090	502.9	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
71	726,893	4,926,116	504.6	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
72	727,294	4,925,730	499.9	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
73	726,193	4,925,369	496.8	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
74	725,000	4,924,250	509.0	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
75	725,550	4,924,000	509.0	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
76	725,945	4,923,953	505.9	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
77	727,944	4,924,197	491.5	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
78	726,543	4,923,299	495.9	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
79	728,053	4,922,750	492.2	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
80	729,829	4,923,439	475.5	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
81	729,715	4,922,566	492.5	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
82	730,027	4,922,727	490.7	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
83	731,300	4,923,150	490.7	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
84	731,477	4,922,321	496.1	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
85	731,818	4,922,393	493.8	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
86	732,198	4,922,322	503.4	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9
87	729,007	4,920,684	495.3	Primary	Yes	VESTAS	V100-2,000	2,000	100.0	80.0	14.9

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

	Easting	Northing	Z [m]	Row data/Description	WTG type		Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]
					Valid	Manufact. Type-generator				
88	729,616	4,921,867	499.9	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
89	730,072	4,921,336	495.6	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
90	730,436	4,921,630	489.1	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
91	730,401	4,920,904	495.7	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
92	730,767	4,921,017	491.8	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
93	731,189	4,921,919	500.2	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
94	728,094	4,919,678	502.8	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
95	728,454	4,919,858	502.9	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
96	728,952	4,919,376	512.1	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
97	730,628	4,919,501	506.0	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
98	730,824	4,920,085	498.1	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
99	731,254	4,920,304	492.0	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9
100	731,233	4,919,505	504.5	Primary	Yes	VESTAS V100-2,000	2,000	100.0	80.0	14.9

Shadow receptor-Input

No.	Name	Easting	Northing	Z	Width	Height	Height	Degrees from	Slope of	Direction mode
				[m]	[m]	[m]	a.g.l. [m]	south cw [°]	window [°]	
H048	H048	728,115	4,916,639	516.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H049	H049	729,402	4,916,508	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H050	H050	729,569	4,916,874	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H051	H051	730,735	4,917,064	503.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H052	H052	731,794	4,916,898	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H053	H053	733,740	4,917,275	503.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H080	H080	733,892	4,918,871	496.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H081	H081	734,062	4,918,455	492.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H082	H082	731,822	4,918,771	504.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H083	H083	731,969	4,917,306	501.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H084	H084	731,115	4,917,750	504.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H085	H085	730,996	4,918,554	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H086	H086	730,055	4,918,409	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H087	H087	729,859	4,917,612	504.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H088	H088	729,346	4,918,466	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H090	H090	729,379	4,917,669	504.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H091	H091	728,270	4,918,198	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H092	H092	727,660	4,918,585	507.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H093	H093	727,196	4,918,680	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H094	H094	726,328	4,917,193	508.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H095	H095	725,053	4,918,637	503.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H096	H096	725,749	4,918,172	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H097	H097	724,605	4,918,290	505.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H112	H112	725,564	4,920,316	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H113	H113	724,645	4,919,053	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H114	H114	727,408	4,920,113	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H115	H115	727,195	4,918,789	503.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H116	H116	727,808	4,920,191	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H117	H117	728,824	4,918,918	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H118	H118	729,840	4,919,722	506.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H119	H119	733,501	4,919,439	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H147	H147	732,601	4,921,545	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H148	H148	731,968	4,921,946	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H149	H149	730,978	4,921,525	490.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H150	H150	730,614	4,921,987	493.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H151	H151	728,411	4,920,456	492.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H152	H152	727,560	4,920,426	493.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H153	H153	725,920	4,921,900	505.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H154	H154	725,506	4,920,392	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H155	H155	724,610	4,920,935	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H156	H156	724,389	4,921,420	506.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H157	H157	724,262	4,920,563	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H161	H161	719,874	4,923,300	527.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H163	H163	722,237	4,923,405	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H165	H165	724,007	4,922,031	510.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H166	H166	722,929	4,922,208	512.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H167	H167	725,905	4,923,197	505.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H168	H168	726,376	4,921,996	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H169	H169	727,888	4,922,075	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H170	H170	729,447	4,923,620	485.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H171	H171	730,476	4,923,553	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H172	H172	730,448	4,922,958	484.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H173	H173	730,945	4,922,563	494.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H174	H174	732,896	4,922,239	494.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H175	H175	732,529	4,923,110	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H198	H198	732,299	4,924,009	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H199	H199	731,149	4,925,228	487.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H200	H200	730,170	4,925,171	494.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H201	H201	729,315	4,924,087	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H202	H202	729,062	4,925,235	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H203	H203	729,073	4,923,692	480.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H204	H204	726,516	4,923,705	496.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H206	H206	724,535	4,924,268	514.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H207	H207	723,763	4,925,198	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H208	H208	722,520	4,924,652	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H209	H209	720,913	4,924,651	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H210	H210	719,507	4,926,626	512.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H211	H211	719,523	4,926,471	514.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H212	H212	719,508	4,926,363	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H213	H213	719,505	4,926,222	515.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H214	H214	719,520	4,925,949	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H215	H215	719,559	4,925,707	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H217	H217	720,364	4,926,560	506.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H220	H220	721,714	4,926,403	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H221	H221	721,151	4,925,769	501.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H222	H222	724,090	4,926,435	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H224	H224	724,495	4,925,892	497.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H225	H225	727,070	4,926,781	494.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H226	H226	726,032	4,926,532	502.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H227	H227	727,725	4,926,770	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H228	H228	730,741	4,925,336	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H230	H230	732,867	4,925,647	469.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H233	H233	733,996	4,925,469	453.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H248	H248	733,466	4,928,352	430.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H249	H249	731,198	4,927,668	473.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H250	H250	729,945	4,927,311	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H251	H251	727,868	4,927,277	486.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H252	H252	727,174	4,926,976	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H253	H253	726,136	4,928,157	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H254	H254	725,409	4,926,953	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H255	H255	724,906	4,926,938	505.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H257	H257	723,631	4,928,266	501.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H258	H258	722,827	4,927,341	502.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H259	H259	722,426	4,928,074	502.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H260	H260	722,146	4,928,204	507.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H261	H261	721,153	4,926,772	500.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H262	H262	720,658	4,927,958	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H278	H278	720,561	4,928,494	507.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H279	H279	720,947	4,929,553	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H280	H280	721,059	4,929,572	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H281	H281	722,112	4,928,971	502.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H282	H282	722,047	4,929,705	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H283	H283	722,783	4,929,036	500.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H284	H284	723,329	4,929,926	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H285	H285	724,173	4,929,776	495.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H286	H286	724,573	4,928,599	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H287	H287	726,685	4,928,739	479.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H288	H288	725,925	4,929,877	478.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H289	H289	727,931	4,928,837	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H292	H292	729,748	4,928,899	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H293	H293	730,428	4,930,100	457.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H294	H294	732,309	4,929,759	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H295	H295	733,156	4,931,801	423.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H296	H296	733,299	4,930,528	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H297	H297	730,732	4,931,660	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H299	H299	729,943	4,931,746	451.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H300	H300	728,657	4,930,240	468.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H301	H301	727,843	4,931,649	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H302	H302	728,688	4,931,663	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H303	H303	726,149	4,930,379	475.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H305	H305	724,247	4,930,703	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H307	H307	723,993	4,931,431	483.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H308	H308	722,594	4,931,039	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H309	H309	722,171	4,931,027	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H310	H310	721,293	4,930,646	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H311	H311	721,574	4,931,459	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H312	H312	720,950	4,931,718	506.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H313	H313	721,869	4,931,720	506.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H314	H314	722,445	4,932,328	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H315	H315	722,907	4,932,108	484.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H316	H316	722,291	4,932,632	478.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H317	H317	723,428	4,932,915	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H318	H318	724,132	4,932,703	476.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H319	H319	725,462	4,932,557	465.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H320	H320	725,235	4,931,900	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H321	H321	726,401	4,932,818	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H322	H322	727,242	4,932,330	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H323	H323	727,883	4,931,792	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H324	H324	729,140	4,932,472	451.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H325	H325	729,778	4,932,315	448.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H326	H326	730,143	4,933,232	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H327	H327	730,991	4,932,569	435.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H328	H328	731,748	4,933,066	426.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H330	H330	733,715	4,932,788	410.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H331	H331	733,786	4,932,965	411.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H334	H334	733,512	4,933,404	403.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H335	H335	732,170	4,934,010	415.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H336	H336	732,168	4,934,316	405.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H337	H337	731,900	4,934,701	410.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H338	H338	731,026	4,934,775	415.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H339	H339	730,162	4,934,981	423.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H340	H340	729,245	4,934,684	432.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H341	H341	728,538	4,934,833	436.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H342	H342	727,624	4,934,523	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H343	H343	725,770	4,933,628	460.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H345	H345	724,138	4,933,926	472.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H346	H346	724,049	4,934,248	467.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H347	H347	723,930	4,933,727	474.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H348	H348	721,813	4,933,283	475.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H349	H349	721,098	4,934,128	483.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H350	H350	721,670	4,934,790	486.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H351	H351	723,260	4,935,189	469.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H352	H352	723,642	4,935,778	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H353	H353	724,065	4,935,805	460.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H354	H354	724,602	4,935,135	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H355	H355	728,849	4,928,393	463.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H356	H356	732,723	4,928,604	421.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H357	H357	733,778	4,926,437	445.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H358	H358	732,570	4,923,836	473.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H359	H359	723,754	4,924,013	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H360	H360	729,031	4,921,984	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H361	H361	729,422	4,921,135	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H362	H362	727,502	4,920,433	493.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H363	H363	730,944	4,918,814	507.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H364	H364	724,155	4,936,433	454.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H365	H365	724,528	4,936,423	453.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H366	H366	725,463	4,936,235	451.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H367	H367	726,789	4,936,117	441.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H368	H368	726,834	4,935,674	444.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H369	H369	727,227	4,935,749	439.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H370	H370	728,722	4,935,700	431.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H371	H371	728,990	4,935,533	424.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H372	H372	723,087	4,937,254	432.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H373	H373	723,847	4,937,637	429.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H374	H374	722,400	4,937,023	442.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H375	H375	717,939	4,936,666	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H376	H376	717,348	4,935,787	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H377	H377	719,427	4,935,624	483.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H378	H378	720,478	4,935,343	481.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H379	H379	717,052	4,935,051	491.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H380	H380	717,361	4,934,918	490.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H381	H381	718,033	4,934,915	496.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H382	H382	719,570	4,934,987	483.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H383	H383	718,939	4,934,649	490.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H384	H384	718,363	4,934,282	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H385	H385	720,227	4,934,216	473.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H386	H386	719,469	4,932,351	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H387	H387	720,374	4,931,680	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H388	H388	719,527	4,931,060	499.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H389	H389	719,883	4,931,108	502.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H390	H390	720,045	4,931,077	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H391	H391	720,045	4,931,054	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H392	H392	720,043	4,931,025	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H393	H393	720,047	4,930,997	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H394	H394	720,058	4,930,934	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H395	H395	720,050	4,931,112	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H396	H396	720,520	4,931,120	505.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H397	H397	720,056	4,930,918	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H398	H398	720,056	4,930,883	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H399	H399	720,026	4,930,818	502.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H400	H400	720,090	4,930,817	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H401	H401	719,212	4,930,271	506.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H402	H402	720,196	4,930,196	501.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H403	H403	719,426	4,929,541	503.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H404	H404	718,603	4,929,272	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H405	H405	718,065	4,928,934	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H406	H406	719,426	4,928,658	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H407	H407	718,741	4,928,291	502.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H408	H408	717,825	4,928,342	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H409	H409	717,737	4,928,130	506.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H410	H410	717,968	4,927,972	503.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H411	H411	719,345	4,927,841	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H412	H412	718,640	4,927,210	509.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H413	H413	718,674	4,927,202	509.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H414	H414	718,719	4,927,194	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H415	H415	718,746	4,927,190	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H416	H416	718,650	4,927,138	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H417	H417	718,524	4,927,140	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H418	H418	718,773	4,927,185	508.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H419	H419	718,717	4,927,134	511.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H420	H420	718,719	4,927,122	511.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H421	H421	718,649	4,927,122	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H422	H422	718,762	4,927,140	510.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H423	H423	718,760	4,927,123	511.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H424	H424	718,831	4,927,126	509.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H425	H425	718,888	4,927,123	508.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H426	H426	719,017	4,927,257	503.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H427	H427	719,468	4,927,074	503.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H428	H428	719,572	4,926,856	509.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H429	H429	719,530	4,926,789	512.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H430	H430	719,534	4,926,763	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H431	H431	719,490	4,926,738	512.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H432	H432	719,408	4,926,829	509.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H433	H433	719,403	4,926,777	510.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H434	H434	719,380	4,926,829	509.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H435	H435	719,399	4,926,968	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H436	H436	719,399	4,926,945	506.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H437	H437	719,377	4,927,021	505.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H438	H438	719,351	4,927,025	505.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H439	H439	719,328	4,927,030	505.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H440	H440	719,234	4,927,054	507.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H441	H441	719,169	4,927,074	507.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H442	H442	719,070	4,927,094	507.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H443	H443	718,996	4,927,108	507.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H444	H444	718,923	4,927,121	507.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H445	H445	718,421	4,926,841	509.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H446	H446	718,434	4,926,862	510.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H447	H447	718,493	4,926,914	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H448	H448	718,492	4,926,941	513.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H449	H449	718,495	4,926,956	513.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H450	H450	718,491	4,927,025	513.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H451	H451	718,426	4,926,767	510.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H452	H452	717,742	4,926,689	510.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H453	H453	718,452	4,926,708	511.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H454	H454	718,493	4,926,708	512.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H455	H455	718,554	4,926,754	514.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H456	H456	718,619	4,926,695	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H457	H457	718,680	4,926,647	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H458	H458	718,731	4,926,613	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H459	H459	718,735	4,926,591	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H460	H460	718,736	4,926,532	514.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H461	H461	718,737	4,926,501	514.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H462	H462	718,738	4,926,469	513.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H463	H463	718,669	4,926,475	514.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H464	H464	718,782	4,926,469	513.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H465	H465	718,848	4,926,463	513.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]	[m]	[m]	[m]	[°]	[°]	
H466	H466	718,896	4,926,471	513.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H467	H467	718,961	4,926,477	512.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H468	H468	719,015	4,926,468	512.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H469	H469	719,076	4,926,472	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H470	H470	719,121	4,926,477	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H471	H471	719,215	4,926,502	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H472	H472	719,307	4,926,427	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H473	H473	719,352	4,926,461	514.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H474	H474	719,383	4,926,461	514.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H475	H475	719,464	4,926,375	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H476	H476	719,576	4,926,416	514.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H477	H477	719,566	4,926,470	514.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H478	H478	719,535	4,926,339	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H479	H479	719,536	4,926,309	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H480	H480	719,536	4,926,284	515.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H481	H481	719,537	4,926,259	515.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H482	H482	719,541	4,926,230	515.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H483	H483	719,534	4,926,180	516.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H484	H484	719,544	4,925,995	518.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H485	H485	719,511	4,926,019	517.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H486	H486	719,492	4,926,169	516.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H487	H487	719,477	4,926,230	516.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H488	H488	719,487	4,926,336	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H489	H489	719,102	4,926,261	515.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H490	H490	719,043	4,926,243	518.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H491	H491	719,175	4,926,227	515.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H492	H492	717,799	4,926,069	512.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H493	H493	719,379	4,925,767	520.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H494	H494	718,045	4,925,241	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H495	H495	719,130	4,924,317	521.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H496	H496	719,026	4,924,271	523.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
H497	H497	719,904	4,923,356	529.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

Calculation Results

Shadow receptor

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H048	H048	0:00	0	0:00	0:00
H049	H049	0:00	0	0:00	0:00
H050	H050	0:00	0	0:00	0:00
H051	H051	0:00	0	0:00	0:00
H052	H052	0:00	0	0:00	0:00
H053	H053	0:00	0	0:00	0:00
H080	H080	0:00	0	0:00	0:00
H081	H081	0:00	0	0:00	0:00
H082	H082	0:00	0	0:00	0:00
H083	H083	0:00	0	0:00	0:00
H084	H084	0:00	0	0:00	0:00
H085	H085	0:00	0	0:00	0:00
H086	H086	0:00	0	0:00	0:00
H087	H087	0:00	0	0:00	0:00
H088	H088	0:00	0	0:00	0:00
H090	H090	0:00	0	0:00	0:00
H091	H091	0:00	0	0:00	0:00
H092	H092	0:00	0	0:00	0:00
H093	H093	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H094	H094	0:00	0	0:00	0:00
H095	H095	0:00	0	0:00	0:00
H096	H096	0:00	0	0:00	0:00
H097	H097	0:00	0	0:00	0:00
H112	H112	0:00	0	0:00	0:00
H113	H113	0:00	0	0:00	0:00
H114	H114	30:34	95	0:30	11:10
H115	H115	0:00	0	0:00	0:00
H116	H116	38:43	136	0:33	14:18
H117	H117	0:00	0	0:00	0:00
H118	H118	34:53	105	0:51	12:40
H119	H119	0:00	0	0:00	0:00
H147	H147	2:58	22	0:12	1:14
H148	H148	12:27	38	0:29	4:39
H149	H149	62:26	168	0:51	23:48
H150	H150	63:27	141	1:02	22:56
H151	H151	40:53	88	0:38	15:25
H152	H152	16:15	73	0:23	5:54
H153	H153	0:00	0	0:00	0:00
H154	H154	0:00	0	0:00	0:00
H155	H155	0:00	0	0:00	0:00
H156	H156	0:00	0	0:00	0:00
H157	H157	0:00	0	0:00	0:00
H161	H161	0:00	0	0:00	0:00
H163	H163	0:00	0	0:00	0:00
H165	H165	0:00	0	0:00	0:00
H166	H166	0:00	0	0:00	0:00
H167	H167	21:26	51	0:36	7:53
H168	H168	0:00	0	0:00	0:00
H169	H169	0:00	0	0:00	0:00
H170	H170	57:06	82	0:56	22:00
H171	H171	33:23	86	0:35	11:58
H172	H172	71:47	153	1:04	24:21
H173	H173	54:10	145	0:41	20:58
H174	H174	23:45	62	0:39	9:37
H175	H175	19:37	93	0:18	5:56
H198	H198	13:32	50	0:19	3:47
H199	H199	0:00	0	0:00	0:00
H200	H200	0:00	0	0:00	0:00
H201	H201	2:50	20	0:13	1:06
H202	H202	0:00	0	0:00	0:00
H203	H203	34:27	140	0:30	13:51
H204	H204	53:41	108	0:41	24:31
H206	H206	47:29	91	0:50	18:05
H207	H207	0:00	0	0:00	0:00
H208	H208	0:00	0	0:00	0:00
H209	H209	0:00	0	0:00	0:00
H210	H210	0:00	0	0:00	0:00
H211	H211	0:00	0	0:00	0:00
H212	H212	0:00	0	0:00	0:00
H213	H213	0:00	0	0:00	0:00
H214	H214	0:00	0	0:00	0:00
H215	H215	0:00	0	0:00	0:00
H217	H217	0:00	0	0:00	0:00
H220	H220	0:00	0	0:00	0:00
H221	H221	0:00	0	0:00	0:00
H222	H222	46:04	86	0:43	19:38
H224	H224	16:42	60	0:25	6:13

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Shadow, worst case			Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]	
H225	H225	23:35	58	0:30	6:34	
H226	H226	15:24	76	0:25	5:37	
H227	H227	18:39	74	0:24	5:22	
H228	H228	0:00	0	0:00	0:00	
H230	H230	0:00	0	0:00	0:00	
H233	H233	0:00	0	0:00	0:00	
H248	H248	0:00	0	0:00	0:00	
H249	H249	0:00	0	0:00	0:00	
H250	H250	0:00	0	0:00	0:00	
H251	H251	37:30	92	0:45	15:50	
H252	H252	0:00	0	0:00	0:00	
H253	H253	36:06	90	0:39	13:00	
H254	H254	2:27	20	0:11	0:52	
H255	H255	12:27	93	0:14	4:51	
H257	H257	7:18	31	0:18	2:30	
H258	H258	56:35	122	0:47	21:47	
H259	H259	34:49	142	0:31	12:56	
H260	H260	17:05	92	0:18	6:28	
H261	H261	0:00	0	0:00	0:00	
H262	H262	0:00	0	0:00	0:00	
H278	H278	0:00	0	0:00	0:00	
H279	H279	0:00	0	0:00	0:00	
H280	H280	0:00	0	0:00	0:00	
H281	H281	13:20	65	0:19	5:02	
H282	H282	4:50	25	0:18	1:47	
H283	H283	72:05	159	0:46	27:10	
H284	H284	9:28	42	0:16	3:18	
H285	H285	65:05	186	0:43	22:04	
H286	H286	22:55	93	0:25	9:06	
H287	H287	38:26	123	0:38	14:36	
H288	H288	59:32	138	0:47	22:31	
H289	H289	61:42	163	0:39	20:57	
H292	H292	24:29	96	0:25	10:34	
H293	H293	42:36	56	1:10	16:03	
H294	H294	3:42	22	0:15	1:31	
H295	H295	0:00	0	0:00	0:00	
H296	H296	0:00	0	0:00	0:00	
H297	H297	15:39	54	0:21	4:23	
H299	H299	0:00	0	0:00	0:00	
H300	H300	52:36	181	0:31	19:11	
H301	H301	41:11	90	0:52	13:36	
H302	H302	42:37	91	0:44	12:51	
H303	H303	42:39	129	0:33	16:33	
H305	H305	36:54	103	0:38	15:07	
H307	H307	14:40	56	0:24	5:16	
H308	H308	50:16	78	0:49	19:34	
H309	H309	25:59	85	0:25	9:19	
H310	H310	0:00	0	0:00	0:00	
H311	H311	1:36	16	0:09	0:35	
H312	H312	0:00	0	0:00	0:00	
H313	H313	3:47	23	0:15	1:27	
H314	H314	0:00	0	0:00	0:00	
H315	H315	0:00	0	0:00	0:00	
H316	H316	0:00	0	0:00	0:00	
H317	H317	13:30	84	0:18	5:12	
H318	H318	53:32	73	0:54	20:50	
H319	H319	65:43	132	0:52	26:18	
H320	H320	0:00	0	0:00	0:00	

To be continued on next page...

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
 3100 DeMers Avenue
 US-GRAND FORKS, ND 58201
 +1 701 775 3000
 Jay Haley / jhaley@eapc.net
 Calculated:
 6/27/2016 2:32 PM/3.0.654

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H321	H321	43:42	120	0:38	13:20
H322	H322	5:50	44	0:13	2:16
H323	H323	4:24	28	0:14	1:17
H324	H324	4:17	24	0:16	1:45
H325	H325	0:00	0	0:00	0:00
H326	H326	0:00	0	0:00	0:00
H327	H327	0:00	0	0:00	0:00
H328	H328	0:00	0	0:00	0:00
H330	H330	0:00	0	0:00	0:00
H331	H331	0:00	0	0:00	0:00
H334	H334	0:00	0	0:00	0:00
H335	H335	0:00	0	0:00	0:00
H336	H336	0:00	0	0:00	0:00
H337	H337	0:00	0	0:00	0:00
H338	H338	0:00	0	0:00	0:00
H339	H339	0:00	0	0:00	0:00
H340	H340	0:00	0	0:00	0:00
H341	H341	0:00	0	0:00	0:00
H342	H342	0:00	0	0:00	0:00
H343	H343	46:48	87	0:59	17:12
H345	H345	72:54	196	0:40	28:38
H346	H346	44:06	134	0:47	15:33
H347	H347	32:26	86	0:37	12:45
H348	H348	12:58	70	0:16	5:36
H349	H349	20:41	64	0:33	7:25
H350	H350	26:54	84	0:32	9:48
H351	H351	22:36	84	0:21	6:57
H352	H352	0:00	0	0:00	0:00
H353	H353	0:00	0	0:00	0:00
H354	H354	16:55	65	0:24	5:53
H355	H355	26:25	71	0:33	9:27
H356	H356	0:00	0	0:00	0:00
H357	H357	0:00	0	0:00	0:00
H358	H358	4:03	25	0:15	1:13
H359	H359	4:28	24	0:16	1:37
H360	H360	32:17	101	0:39	12:06
H361	H361	74:18	192	0:39	24:48
H362	H362	10:57	46	0:22	3:56
H363	H363	0:00	0	0:00	0:00
H364	H364	0:00	0	0:00	0:00
H365	H365	0:00	0	0:00	0:00
H366	H366	0:00	0	0:00	0:00
H367	H367	0:00	0	0:00	0:00
H368	H368	0:00	0	0:00	0:00
H369	H369	0:00	0	0:00	0:00
H370	H370	0:00	0	0:00	0:00
H371	H371	0:00	0	0:00	0:00
H372	H372	0:00	0	0:00	0:00
H373	H373	0:00	0	0:00	0:00
H374	H374	0:00	0	0:00	0:00
H375	H375	0:00	0	0:00	0:00
H376	H376	0:00	0	0:00	0:00
H377	H377	0:00	0	0:00	0:00
H378	H378	19:11	63	0:30	7:13
H379	H379	0:00	0	0:00	0:00
H380	H380	0:00	0	0:00	0:00
H381	H381	0:00	0	0:00	0:00
H382	H382	0:00	0	0:00	0:00

To be continued on next page...

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
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+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
H383	H383	0:00	0	0:00	0:00
H384	H384	0:00	0	0:00	0:00
H385	H385	24:27	83	0:28	8:56
H386	H386	0:00	0	0:00	0:00
H387	H387	0:00	0	0:00	0:00
H388	H388	0:00	0	0:00	0:00
H389	H389	0:00	0	0:00	0:00
H390	H390	0:00	0	0:00	0:00
H391	H391	0:00	0	0:00	0:00
H392	H392	0:00	0	0:00	0:00
H393	H393	0:00	0	0:00	0:00
H394	H394	0:00	0	0:00	0:00
H395	H395	0:00	0	0:00	0:00
H396	H396	0:00	0	0:00	0:00
H397	H397	0:00	0	0:00	0:00
H398	H398	0:00	0	0:00	0:00
H399	H399	0:00	0	0:00	0:00
H400	H400	0:00	0	0:00	0:00
H401	H401	0:00	0	0:00	0:00
H402	H402	0:00	0	0:00	0:00
H403	H403	0:00	0	0:00	0:00
H404	H404	0:00	0	0:00	0:00
H405	H405	0:00	0	0:00	0:00
H406	H406	0:00	0	0:00	0:00
H407	H407	0:00	0	0:00	0:00
H408	H408	0:00	0	0:00	0:00
H409	H409	0:00	0	0:00	0:00
H410	H410	0:00	0	0:00	0:00
H411	H411	0:00	0	0:00	0:00
H412	H412	0:00	0	0:00	0:00
H413	H413	0:00	0	0:00	0:00
H414	H414	0:00	0	0:00	0:00
H415	H415	0:00	0	0:00	0:00
H416	H416	0:00	0	0:00	0:00
H417	H417	0:00	0	0:00	0:00
H418	H418	0:00	0	0:00	0:00
H419	H419	0:00	0	0:00	0:00
H420	H420	0:00	0	0:00	0:00
H421	H421	0:00	0	0:00	0:00
H422	H422	0:00	0	0:00	0:00
H423	H423	0:00	0	0:00	0:00
H424	H424	0:00	0	0:00	0:00
H425	H425	0:00	0	0:00	0:00
H426	H426	0:00	0	0:00	0:00
H427	H427	0:00	0	0:00	0:00
H428	H428	0:00	0	0:00	0:00
H429	H429	0:00	0	0:00	0:00
H430	H430	0:00	0	0:00	0:00
H431	H431	0:00	0	0:00	0:00
H432	H432	0:00	0	0:00	0:00
H433	H433	0:00	0	0:00	0:00
H434	H434	0:00	0	0:00	0:00
H435	H435	0:00	0	0:00	0:00
H436	H436	0:00	0	0:00	0:00
H437	H437	0:00	0	0:00	0:00
H438	H438	0:00	0	0:00	0:00
H439	H439	0:00	0	0:00	0:00
H440	H440	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Shadow, worst case		Max shadow hours per day [h/day]	Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]	Shadow hours per year [h/year]
H441	H441	0:00	0	0:00	0:00	0:00
H442	H442	0:00	0	0:00	0:00	0:00
H443	H443	0:00	0	0:00	0:00	0:00
H444	H444	0:00	0	0:00	0:00	0:00
H445	H445	0:00	0	0:00	0:00	0:00
H446	H446	0:00	0	0:00	0:00	0:00
H447	H447	0:00	0	0:00	0:00	0:00
H448	H448	0:00	0	0:00	0:00	0:00
H449	H449	0:00	0	0:00	0:00	0:00
H450	H450	0:00	0	0:00	0:00	0:00
H451	H451	0:00	0	0:00	0:00	0:00
H452	H452	0:00	0	0:00	0:00	0:00
H453	H453	0:00	0	0:00	0:00	0:00
H454	H454	0:00	0	0:00	0:00	0:00
H455	H455	0:00	0	0:00	0:00	0:00
H456	H456	0:00	0	0:00	0:00	0:00
H457	H457	0:00	0	0:00	0:00	0:00
H458	H458	0:00	0	0:00	0:00	0:00
H459	H459	0:00	0	0:00	0:00	0:00
H460	H460	0:00	0	0:00	0:00	0:00
H461	H461	0:00	0	0:00	0:00	0:00
H462	H462	0:00	0	0:00	0:00	0:00
H463	H463	0:00	0	0:00	0:00	0:00
H464	H464	0:00	0	0:00	0:00	0:00
H465	H465	0:00	0	0:00	0:00	0:00
H466	H466	0:00	0	0:00	0:00	0:00
H467	H467	0:00	0	0:00	0:00	0:00
H468	H468	0:00	0	0:00	0:00	0:00
H469	H469	0:00	0	0:00	0:00	0:00
H470	H470	0:00	0	0:00	0:00	0:00
H471	H471	0:00	0	0:00	0:00	0:00
H472	H472	0:00	0	0:00	0:00	0:00
H473	H473	0:00	0	0:00	0:00	0:00
H474	H474	0:00	0	0:00	0:00	0:00
H475	H475	0:00	0	0:00	0:00	0:00
H476	H476	0:00	0	0:00	0:00	0:00
H477	H477	0:00	0	0:00	0:00	0:00
H478	H478	0:00	0	0:00	0:00	0:00
H479	H479	0:00	0	0:00	0:00	0:00
H480	H480	0:00	0	0:00	0:00	0:00
H481	H481	0:00	0	0:00	0:00	0:00
H482	H482	0:00	0	0:00	0:00	0:00
H483	H483	0:00	0	0:00	0:00	0:00
H484	H484	0:00	0	0:00	0:00	0:00
H485	H485	0:00	0	0:00	0:00	0:00
H486	H486	0:00	0	0:00	0:00	0:00
H487	H487	0:00	0	0:00	0:00	0:00
H488	H488	0:00	0	0:00	0:00	0:00
H489	H489	0:00	0	0:00	0:00	0:00
H490	H490	0:00	0	0:00	0:00	0:00
H491	H491	0:00	0	0:00	0:00	0:00
H492	H492	0:00	0	0:00	0:00	0:00
H493	H493	0:00	0	0:00	0:00	0:00
H494	H494	0:00	0	0:00	0:00	0:00
H495	H495	0:00	0	0:00	0:00	0:00
H496	H496	0:00	0	0:00	0:00	0:00
H497	H497	0:00	0	0:00	0:00	0:00

Project:

20162030 Westwood Red Pine

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Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	Primary	14:17	5:25
2	Primary	4:54	1:47
3	Primary	6:10	2:20
4	Primary	27:03	10:36
5	Primary	20:52	7:28
6	Primary	43:02	14:15
7	Primary	19:03	8:01
8	Primary	6:08	2:03
9	Primary	38:45	14:31
10	Primary	40:42	15:04
11	Primary	16:53	6:04
12	Primary	62:48	23:40
13	Primary	10:05	3:40
14	Primary	2:30	0:55
15	Primary	29:09	11:00
16	Primary	79:57	31:46
17	Primary	0:00	0:00
18	Primary	9:46	3:31
19	Primary	85:57	29:36
20	Primary	4:33	1:41
21	Primary	9:00	3:34
22	Primary	88:42	34:19
23	Primary	30:03	11:39
24	Primary	21:43	8:58
25	Primary	14:31	6:35
26	Primary	0:00	0:00
27	Primary	8:59	2:40
28	Primary	32:41	12:27
29	Primary	16:39	5:20
30	Primary	29:02	8:37
31	Primary	24:34	8:23
32	Primary	16:01	6:59
33	Primary	32:19	10:15
34	Primary	0:00	0:00
35	Primary	20:25	7:18
36	Primary	51:46	16:41
37	Primary	67:12	25:06
38	Primary	29:54	11:51
39	Primary	9:28	3:18
40	Primary	25:02	8:58
41	Primary	18:58	7:43
42	Primary	29:24	11:04
43	Primary	11:25	4:02
44	Primary	0:00	0:00
45	Primary	0:00	0:00
46	Primary	24:18	8:50
47	Primary	19:15	5:31
48	Primary	0:00	0:00
49	Primary	0:00	0:00
50	Primary	28:38	10:48
51	Primary	21:06	8:03
52	Primary	15:12	6:42
53	Primary	20:32	7:42
54	Primary	35:24	13:28
55	Primary	62:41	23:35
56	Primary	26:53	10:14
57	Primary	5:21	1:56
58	Primary	7:18	2:30
59	Primary	6:18	2:27
60	Primary	24:45	9:02

To be continued on next page...

Project:

20162030 Westwood Red Pine

Licensed user:

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Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Main Result

Calculation: V100-2.0 80m HH v26

...continued from previous page

No.	Name	Worst case [h/year]	Expected [h/year]
61	Primary	28:15	8:34
62	Primary	9:50	3:51
63	Primary	36:09	14:48
64	Primary	14:03	4:46
65	Primary	18:12	6:47
66	Primary	48:19	20:21
67	Primary	6:39	2:28
68	Primary	10:03	3:44
69	Primary	10:18	2:55
70	Primary	13:17	3:38
71	Primary	29:48	9:27
72	Primary	4:15	1:32
73	Primary	0:00	0:00
74	Primary	45:08	17:10
75	Primary	18:37	7:43
76	Primary	43:31	19:59
77	Primary	18:43	8:31
78	Primary	21:26	7:53
79	Primary	5:07	1:22
80	Primary	86:11	32:22
81	Primary	18:53	6:19
82	Primary	52:52	18:10
83	Primary	48:17	16:18
84	Primary	65:23	24:01
85	Primary	31:22	10:58
86	Primary	27:39	11:02
87	Primary	74:59	25:19
88	Primary	36:00	13:44
89	Primary	41:28	14:48
90	Primary	63:24	24:34
91	Primary	16:41	5:16
92	Primary	2:28	0:56
93	Primary	41:25	15:42
94	Primary	23:47	8:37
95	Primary	43:39	16:10
96	Primary	20:56	7:22
97	Primary	12:43	4:33
98	Primary	8:02	2:58
99	Primary	0:00	0:00
100	Primary	2:25	0:53

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H048 - H048

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:24	20:57	21:13	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H049 - H049

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:44	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H050 - H050

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H051 - H051

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:19	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H052 - H052

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:45
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:58	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:29	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:06	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H053 - H053

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:50	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:12	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:00	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:36	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:24	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:35	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:05	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:37	07:13	07:50	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:43	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H080 - H080

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:50	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
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	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H081 - H081

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:50	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:06	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:00	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:51	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:36	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:47	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:35	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:53
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:32	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:26	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:16	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:02	06:37	07:13	07:50	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:36	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:24	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H082 - H082

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:06	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H083 - H083

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
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	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:45	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:02	17:42	18:19	19:58	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:07	21:10	20:40	19:48	18:51	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:46
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	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:58	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
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	17:15	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:50	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H084 - H084

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:44
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H085 - H085

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H086 - H086

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H087 - H087

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:40	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:50	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H088 - H088

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	18:11	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	07:21	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	18:13	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:10	07:20	06:17	05:45	05:40	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	18:14	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H090 - H090

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	07:59	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:57	16:47
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H091 - H091

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:42
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:49	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:50	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:24	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:22	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:02	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:13	20:55	20:10	19:13	18:20	16:48	16:53	16:53
30	07:46	07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01	16:53
	17:31	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54	16:54
31	07:45	07:09	07:19	06:19	05:45	06:10	06:46	07:22	07:59	07:39	08:01	16:54
	17:32	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:16	16:48	16:54	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H092 - H092

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:41	21:09	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:10	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:14	20:55	20:10	19:13	18:20	16:48	16:53	16:53
30	07:46	07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01	16:53
	17:31	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54	16:54
31	07:45	07:09	07:19	06:19	05:45	06:10	06:46	07:22	07:59	07:39	08:01	16:54
	17:32	19:49	20:27	21:00	21:14	20:53	20:06	19:09	18:16	16:47	16:55	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H093 - H093

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H094 - H094

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H095 - H095

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H096 - H096

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H097 - H097

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:01	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:12	16:47
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:16	07:52
	17:08	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:47
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:36	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
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	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:22	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H112 - H112

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H113 - H113

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:47
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H114 - H114

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	07:44	08:24 (94)	07:04	07:24 (95)	07:08
	16:56	17:34	24 08:48 (94)	18:11	21 07:45 (95)	19:50
2	08:01	07:43	08:25 (94)	07:02	07:23 (95)	07:06
	16:57	17:35	22 08:47 (94)	18:12	21 07:44 (95)	19:52
3	08:01	07:42	08:26 (94)	07:00	07:24 (95)	07:04
	16:58	17:36	20 08:46 (94)	18:14	20 07:44 (95)	19:53
4	08:01	08:26 (94)	07:41	08:27 (94)	06:58	07:25 (95)
	16:59	3 08:29 (94)	17:38	17 08:44 (94)	18:15	18 07:43 (95)
5	08:01	08:25 (94)	07:40	08:30 (94)	06:57	07:25 (95)
	17:00	6 08:31 (94)	17:39	12 08:42 (94)	18:16	16 07:41 (95)
6	08:01	08:25 (94)	07:38	06:55	07:27 (95)	06:58
	17:01	8 08:33 (94)	17:41	18:18	12 07:39 (95)	19:57
7	08:01	08:25 (94)	07:37	06:53	07:31 (95)	06:57
	17:02	10 08:35 (94)	17:42	18:19	4 07:35 (95)	19:58
8	08:01	08:25 (94)	07:36	07:51	06:55	06:07
	17:03	12 08:37 (94)	17:43	18:20	19:59	20:36
9	08:01	08:24 (94)	07:34	07:50	06:53	06:06
	17:04	13 08:37 (94)	17:45	19:21	20:00	20:37
10	08:00	08:24 (94)	07:33	07:48	06:51	06:05
	17:05	15 08:39 (94)	17:46	19:23	20:01	20:38
11	08:00	08:24 (94)	07:32	07:46	06:50	06:03
	17:06	16 08:40 (94)	17:48	19:24	20:03	20:39
12	08:00	08:23 (94)	07:30	07:44	06:48	06:02
	17:07	18 08:41 (94)	17:49	19:25	20:04	20:40
13	07:59	08:23 (94)	07:29	07:42	06:46	06:01
	17:09	19 08:42 (94)	17:50	19:27	20:05	20:42
14	07:59	08:22 (94)	07:27	07:41	06:44	06:00
	17:10	21 08:43 (94)	17:52	19:28	20:06	20:43
15	07:58	08:21 (94)	07:26	07:39	06:43	05:59
	17:11	22 08:43 (94)	17:53	19:29	20:08	20:44
16	07:58	08:21 (94)	07:25	07:37	06:41	05:58
	17:12	24 08:45 (94)	17:55	19:30	20:09	20:45
17	07:57	08:20 (94)	07:23	07:35	06:39	05:56
	17:13	25 08:45 (94)	17:56	19:32	20:10	20:46
18	07:57	08:19 (94)	07:22	07:33	06:37	05:55
	17:15	27 08:46 (94)	17:57	19:33	20:11	20:47
19	07:56	08:19 (94)	07:20	07:31	06:36	05:54
	17:16	28 08:47 (94)	17:59	19:34	20:13	20:48
20	07:55	08:18 (94)	07:18	07:30	06:34	05:53
	17:17	29 08:47 (94)	18:00	19:35	20:14	20:49
21	07:55	08:18 (94)	07:17	07:28	06:32	05:52
	17:19	30 08:48 (94)	18:00	19:37	20:15	20:50
22	07:54	08:18 (94)	07:15	07:26	06:31	05:52
	17:20	30 08:48 (94)	18:02	5 07:41 (95)	19:38	20:16
23	07:53	08:18 (94)	07:14	07:34 (95)	07:24	06:29
	17:21	30 08:48 (94)	18:03	8 07:42 (95)	19:39	20:17
24	07:52	08:19 (94)	07:12	07:33 (95)	07:22	06:28
	17:23	30 08:49 (94)	18:04	11 07:44 (95)	19:40	20:19
25	07:51	08:20 (94)	07:10	07:31 (95)	07:20	06:26
	17:24	30 08:50 (94)	18:06	13 07:44 (95)	19:42	20:20
26	07:50	08:20 (94)	07:09	07:29 (95)	07:19	06:24
	17:25	30 08:50 (94)	18:07	16 07:45 (95)	19:43	20:21
27	07:49	08:20 (94)	07:07	07:28 (95)	07:17	06:23
	17:27	30 08:50 (94)	18:08	18 07:46 (95)	19:44	20:22
28	07:48	08:21 (94)	07:05	07:26 (95)	07:15	06:21
	17:28	29 08:50 (94)	18:10	19 07:45 (95)	19:45	20:24
29	07:47	08:22 (94)		07:13	06:20	05:46
	17:29	28 08:50 (94)		19:47	20:25	20:58
30	07:46	08:21 (94)		07:11	06:18	05:45
	17:31	27 08:48 (94)		19:48	20:26	20:59
31	07:45	08:22 (94)		07:09		05:45
	17:32	26 08:48 (94)		19:49		21:00
Potential sun hours	288	292	369	403	458	464
Total, worst case	616	185	112			
Sun reduction	0.57	0.59	0.59			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.69	0.66	0.63			
Total reduction	0.39	0.38	0.36			
Total, real	238	71	40			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H114 - H114

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	07:01	07:40
	21:13	20:52	20:04	19:09	17:15	16:47
2	05:45	06:12	06:48	07:23	07:03	07:41
	21:13	20:51	20:03	19:07	17:14	16:47
3	05:45	06:14	06:49	07:24	07:04	07:43
	21:13	20:50	20:01	19:05	17:13	16:47
4	05:46	06:15	06:50	07:26	07:06	07:44
	21:13	20:48	19:59	19:03	17:11	16:46
5	05:46	06:16	06:52	07:27	07:07	07:45
	21:13	20:47	19:57	19:02	17:10	16:46
6	05:47	06:17	06:53	07:28	07:08	07:46
	21:12	20:46	19:55	19:00	17:09	16:46
7	05:48	06:18	06:54	07:29	07:10	07:47
	21:12	20:44	19:54	18:56	08:04 (95)	17:07
8	05:49	06:19	06:55	07:31	07:11	07:48
	21:12	20:43	19:52	18:54	08:13 (95)	17:07
9	05:49	06:20	06:56	07:32	07:12	07:49
	21:11	20:42	19:50	18:53	08:02 (95)	17:06
10	05:50	06:21	06:57	07:33	07:14	07:50
	21:11	20:40	19:48	18:51	08:00 (95)	17:05
11	05:51	06:23	06:59	07:34	07:15	07:51
	21:10	20:39	19:46	18:49	07:58 (95)	17:04
12	05:52	06:24	07:00	07:35	07:16	07:52
	21:10	20:37	19:44	18:47	08:18 (95)	17:03
13	05:52	06:25	07:01	07:37	07:18	07:53
	21:09	20:36	19:43	18:46	07:57 (95)	17:02
14	05:53	06:26	07:02	07:38	07:19	07:54
	21:09	20:34	19:41	18:44	08:18 (95)	17:01
15	05:54	06:27	07:03	07:39	07:20	07:55
	21:08	20:33	19:39	18:42	08:01 (95)	17:00
16	05:55	06:28	07:04	07:41	07:22	07:56
	21:07	20:31	19:37	18:40	08:18 (95)	16:59
17	05:56	06:30	07:06	07:42	07:23	07:57
	21:07	20:30	19:35	18:39	08:02 (95)	16:58
18	05:57	06:31	07:07	07:43	07:24	07:58
	21:06	20:28	19:33	18:37	08:17 (95)	16:57
19	05:58	06:32	07:08	07:44	07:26	07:59
	21:05	20:27	19:31	18:35	08:06 (95)	16:56
20	05:59	06:33	07:09	07:46	07:27	08:00
	21:04	20:25	19:29	18:34	08:13 (95)	16:55
21	06:00	06:34	07:10	07:47	07:28	08:01
	21:03	20:23	19:28	18:32	08:07 (95)	16:54
22	06:01	06:35	07:11	07:48	07:29	08:02
	21:03	20:22	19:26	18:30	08:10 (95)	16:53
23	06:02	06:37	07:13	07:50	07:31	08:03
	21:02	20:20	19:24	18:29	08:05 (95)	16:52
24	06:03	06:38	07:14	07:51	07:32	08:04
	21:01	20:18	19:22	18:27	08:06 (95)	16:51
25	06:04	06:39	07:15	07:52	07:33	08:05
	21:00	20:17	19:20	18:26	08:17 (95)	16:50
26	06:05	06:40	07:16	07:53	07:34	08:06
	20:59	20:15	19:18	18:24	08:08 (95)	16:49
27	06:06	06:41	07:17	07:55	07:36	08:07
	20:58	20:13	19:16	18:23	08:19 (95)	16:48
28	06:07	06:42	07:18	07:56	07:37	08:08
	20:57	20:12	19:15	18:21	08:21 (95)	16:47
29	06:08	06:43	07:20	07:57	07:38	08:09
	20:56	20:10	19:13	18:20	08:23 (95)	16:46
30	06:09	06:45	07:21	07:59	07:39	08:10
	20:54	20:08	19:11	18:18	08:25 (95)	16:45
31	06:10	06:46		08:00	16:48	08:11
	20:53	20:06		18:17	18	16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case				205	631	85
Sun reduction				0.63	0.50	0.49
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.63	0.69	0.69
Total reduction				0.39	0.34	0.33
Total, real				79	214	28

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H115 - H115

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:05	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:57	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H116 - H116

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June						
1	08:01	08:26 (96)	07:44	08:06 (95)	07:04	07:07						
	16:56	13	08:39 (96)	17:34	30	08:36 (95)	18:11	19:50	20:27	1	06:38 (87)	05:44
2	08:01	08:26 (96)	07:43	08:06 (95)	07:02	07:06	06:15	06:39 (87)	21:01			
	16:57	14	08:40 (96)	17:35	31	08:37 (95)	18:12	19:52	20:28	3	06:39 (87)	21:02
3	08:01	08:26 (96)	07:42	08:06 (95)	07:00	07:04	06:14	06:35 (87)	05:43			
	16:58	14	08:40 (96)	17:36	32	08:38 (95)	18:14	19:53	20:30	5	06:40 (87)	21:03
4	08:01	08:26 (96)	07:41	08:05 (95)	06:58	07:02	06:13	06:34 (87)	05:43			
	16:59	15	08:41 (96)	17:38	32	08:37 (95)	18:15	19:54	20:31	7	06:41 (87)	21:04
5	08:01	08:25 (96)	07:40	08:05 (95)	06:57	07:00	06:11	06:32 (87)	05:42			
	17:00	15	08:40 (96)	17:39	33	08:38 (95)	18:16	19:55	20:32	9	06:41 (87)	21:04
6	08:01	08:25 (96)	07:38	08:06 (95)	06:55	06:58	06:10	06:31 (87)	05:42			
	17:01	16	08:41 (96)	17:41	32	08:38 (95)	18:18	19:57	20:33	10	06:41 (87)	21:05
7	08:01	08:25 (96)	07:37	08:06 (95)	06:53	06:57	06:08	06:30 (87)	05:41			
	17:02	17	08:42 (96)	17:42	33	08:39 (95)	18:19	19:58	20:34	12	06:42 (87)	21:06
8	08:01	08:25 (96)	07:36	08:05 (95)	07:51	06:55	06:07	06:29 (87)	05:41			
	17:03	17	08:42 (96)	17:43	33	08:38 (95)	18:20	19:59	20:36	13	06:42 (87)	21:06
9	08:01	08:25 (96)	07:34	08:06 (95)	07:50	06:53	06:06	06:27 (87)	05:41			
	17:04	17	08:42 (96)	17:45	32	08:38 (95)	19:21	20:00	20:37	14	06:41 (87)	21:07
10	08:00	08:26 (96)	07:33	08:06 (95)	07:48	06:51	06:05	06:26 (87)	05:41			
	17:05	16	08:42 (96)	17:46	31	08:37 (95)	19:23	20:01	20:38	14	06:40 (87)	21:08
11	08:00	08:27 (96)	07:32	08:07 (95)	07:46	06:49	06:03	06:25 (87)	05:40			
	17:06	16	08:43 (96)	17:48	30	08:37 (95)	19:24	20:03	20:39	15	06:40 (87)	21:08
12	08:00	08:27 (96)	07:30	08:08 (95)	07:44	06:48	06:02	06:24 (87)	05:40			
	17:07	15	08:42 (96)	17:49	29	08:37 (95)	19:25	20:04	20:40	16	06:40 (87)	21:09
13	07:59	08:29 (96)	07:29	08:08 (95)	07:42	06:46	06:01	06:25 (87)	05:40			
	17:08	13	08:42 (96)	17:50	28	08:36 (95)	19:27	20:05	20:42	14	06:39 (87)	21:10
14	07:59	08:29 (96)	07:27	08:10 (95)	07:41	06:44	06:00	06:27 (87)	05:40			
	17:10	13	08:42 (96)	17:52	25	08:35 (95)	19:28	20:06	20:43	11	06:38 (87)	21:10
15	07:58	08:30 (96)	07:26	08:10 (95)	07:39	06:43	05:59	06:28 (87)	05:40			
	17:11	11	08:41 (96)	17:53	24	08:34 (95)	19:29	20:08	20:44	8	06:36 (87)	21:11
16	07:58	08:32 (96)	07:25	08:12 (95)	07:37	06:41	05:57		05:40			
	17:12	8	08:40 (96)	17:55	20	08:32 (95)	19:30	20:09	20:45			21:11
17	07:57	08:34 (96)	07:23	08:14 (95)	07:35	06:39	05:56		05:40			
	17:13	4	08:38 (96)	17:56	16	08:30 (95)	19:32	20:10	20:46			21:11
18	07:57		07:21	08:17 (95)	07:33	06:37	05:55		05:40			
	17:15		17:57	9	08:26 (95)	19:33	20:11	20:47				21:12
19	07:56		07:20		07:31	06:36	05:54		05:40			
	17:16		17:59		19:34	20:13	20:48		21:12			
20	07:55		07:18		07:30	06:34	05:53		05:40			
	17:17		18:00		19:35	20:14	20:49		21:12			
21	07:55		07:17		07:28	06:32	05:52		05:41			
	17:19		18:00		19:37	20:15	20:50		21:13			
22	07:54		07:15		07:26	06:31	05:52		05:41			
	17:20		18:02		19:38	20:16	20:51		21:13			
23	07:53		07:14		07:24	06:29	05:51		05:41			
	17:21		18:03		19:39	20:17	20:52		21:13			
24	07:52	08:15 (95)	07:12		07:22	06:28	05:50		05:41			
	17:23	10	08:25 (95)	18:04	19:40	20:19	20:54		21:13			
25	07:51	08:14 (95)	07:10		07:20	06:26	05:49		05:42			
	17:24	13	08:27 (95)	18:06	19:42	20:20	20:55		21:13			
26	07:50	08:13 (95)	07:09		07:19	06:24	05:48		05:42			
	17:25	16	08:29 (95)	18:07	19:43	20:21	20:55		21:14			
27	07:49	08:12 (95)	07:07		07:17	06:23	05:47		05:42			
	17:27	19	08:31 (95)	18:08	19:44	20:22	20:56		21:14			
28	07:48	08:11 (95)	07:05		07:15	06:21	05:47		05:43			
	17:28	22	08:33 (95)	18:10	19:45	20:24	20:57		21:14			
29	07:47	08:09 (95)			07:13	06:20	05:46		05:43			
	17:29	24	08:33 (95)		19:47	20:25	20:58		21:14			
30	07:46	08:08 (95)			07:11	06:18	05:45		05:44			
	17:31	26	08:34 (95)		19:48	20:26	20:59		21:14			
31	07:45	08:07 (95)			07:09		05:45					
	17:32	28	08:35 (95)		19:49		21:00					
Potential sun hours	288		292		369	403	458		464			
Total, worst case		392		500			152					
Sun reduction		0.57		0.59			0.65					
Oper. time red.		0.98		0.98			0.98					
Wind dir. red.		0.69		0.68			0.55					
Total reduction		0.39		0.39			0.35					
Total, real		152		197			54					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H116 - H116

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:13	06:11 20:52	06:35 (87) 06:50 (87)	06:47 20:04	07:22 19:09	07:01 17:15
2	05:45 21:13	06:12 20:51	06:36 (87) 06:51 (87)	06:48 20:03	07:23 19:07	07:03 17:14
3	05:45 21:13	06:13 20:50	06:37 (87) 06:51 (87)	06:49 20:01	07:24 19:05	07:04 17:13
4	05:46 21:13	06:15 20:48	06:38 (87) 06:51 (87)	06:50 19:59	07:26 19:03	07:05 17:11
5	05:46 21:13	06:16 20:47	06:39 (87) 06:51 (87)	06:52 19:57	07:27 19:02	07:07 17:10
6	05:47 21:12	06:17 20:46	06:40 (87) 06:51 (87)	06:53 19:55	07:28 19:00	07:08 17:09
7	05:48 21:12	06:18 20:44	06:41 (87) 06:51 (87)	06:54 19:54	07:29 18:56	07:10 17:07
8	05:49 21:12	06:19 20:43	06:42 (87) 06:50 (87)	06:55 19:52	07:31 18:54	07:11 17:06
9	05:49 21:11	06:20 20:42	06:43 (87) 06:50 (87)	06:56 19:50	07:32 18:53	07:12 17:05
10	05:50 21:11	06:21 20:40	06:44 (87) 06:49 (87)	06:57 19:48	07:33 18:51	07:14 17:04
11	05:51 21:10	06:23 20:39	06:45 (87) 06:47 (87)	06:59 19:46	07:34 18:49	07:15 17:03
12	05:52 21:10	06:24 20:37	06:46 (87) 06:47 (87)	07:00 19:44	07:35 18:47	07:16 17:02
13	05:52 21:09	06:25 20:36	06:47 (87) 06:48 (87)	07:01 19:43	07:37 18:46	07:18 17:01
14	05:53 21:09	06:26 20:34	06:49 (87) 06:49 (87)	07:02 19:41	07:38 18:44	07:19 17:00
15	05:54 21:08	06:27 20:33	06:50 (87) 06:49 (87)	07:03 19:39	07:39 18:42	07:20 16:58
16	05:55 21:07	06:28 20:31	06:51 (87) 06:48 (87)	07:04 19:37	07:41 18:40	07:22 16:58
17	05:56 21:07	06:30 20:30	06:52 (87) 06:47 (87)	07:06 19:35	07:42 18:39	07:23 16:57
18	05:57 21:06	06:31 20:28	06:48 (87) 06:47 (87)	07:07 19:33	07:43 18:37	07:24 16:56
19	05:58 21:05	06:32 20:27	06:49 (87) 06:46 (87)	07:08 19:31	07:44 18:35	07:26 16:55
20	05:59 21:04	06:33 20:25	06:50 (87) 06:45 (87)	07:09 19:29	07:46 18:34	07:27 16:54
21	06:00 21:03	06:34 20:23	06:51 (87) 06:44 (87)	07:10 19:28	07:47 18:32	07:28 16:53
22	06:01 21:03	06:35 20:22	06:45 (87) 06:43 (87)	07:11 19:26	07:48 18:30	07:29 16:52
23	06:02 21:02	06:36 20:20	06:46 (87) 06:42 (87)	07:13 19:24	07:50 18:29	07:31 16:52
24	06:03 21:01	06:38 20:18	06:47 (87) 06:41 (87)	07:14 19:22	07:51 18:27	07:32 16:51
25	06:04 21:00	06:39 20:17	06:48 (87) 06:40 (87)	07:15 19:20	07:52 18:26	07:33 16:50
26	06:05 20:59	06:40 20:15	06:49 (87) 06:40 (87)	07:16 19:18	07:53 18:24	07:34 16:50
27	06:06 20:58	06:41 20:13	06:41 (87) 06:39 (87)	07:17 19:16	07:55 18:23	07:36 16:49
28	06:07 20:57	06:42 20:11	06:42 (87) 06:37 (87)	07:18 19:14	07:56 18:21	07:37 16:49
29	06:08 20:56	06:43 20:10	06:43 (87) 06:46 (87)	07:20 19:13	07:57 18:20	07:38 16:48
30	06:09 20:54	06:44 20:08	06:44 (87) 06:49 (87)	07:21 19:11	07:59 18:18	07:39 16:48
31	06:10 20:53	06:45 20:06	06:45 (87) 06:50 (87)	07:22 19:10	08:00 18:17	07:40 16:48
Potential sun hours	470	435	377	341	289	276
Total, worst case	40	112	189	189	540	398
Sun reduction	0.76	0.74	0.63	0.63	0.50	0.49
Oper. time red.	0.98	0.98	0.98	0.98	0.98	0.98
Wind dir. red.	0.55	0.55	0.68	0.68	0.68	0.70
Total reduction	0.41	0.40	0.42	0.42	0.34	0.34
Total, real	16	45	80	80	181	134

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H117 - H117

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:34	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:28	05:44 21:02	05:45 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:58	07:42 17:36	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:13	07:42 16:47
4	08:01 16:59	07:41 17:38	06:58 18:15	07:02 19:54	06:13 20:31	05:43 21:03	05:46 21:13	06:15 20:48	06:50 19:59	07:26 19:03	07:05 17:11	07:44 16:46
5	08:01 17:00	07:39 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:16 20:47	06:52 19:57	07:27 19:02	07:07 17:10	07:45 16:46
6	08:01 17:01	07:38 17:41	06:55 18:18	06:58 19:56	06:10 20:33	05:42 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	06:08 20:34	05:41 21:06	05:48 21:12	06:18 20:44	06:54 19:54	07:29 18:56	07:09 17:07	07:47 16:46
8	08:01 17:03	07:36 17:43	06:51 18:20	06:55 19:59	06:07 20:36	05:41 21:06	05:49 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:46
9	08:01 17:04	07:34 17:45	06:50 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:53	07:12 17:05	07:49 16:46
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:05 20:38	05:41 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:13 17:04	07:50 16:46
11	08:00 17:06	07:32 17:48	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:51 21:10	06:23 20:39	06:59 19:46	07:34 18:49	07:15 17:03	07:50 16:46
12	08:00 17:07	07:30 17:49	07:44 19:25	06:48 20:04	06:02 20:40	05:40 21:09	05:52 21:10	06:24 20:37	07:00 19:44	07:35 18:47	07:16 17:02	07:51 16:46
13	07:59 17:08	07:29 17:50	07:42 19:27	06:46 20:05	06:01 20:41	05:40 21:09	05:52 21:09	06:25 20:36	07:01 19:43	07:37 18:45	07:18 17:01	07:52 16:46
14	07:59 17:10	07:27 17:52	07:41 19:28	06:44 20:06	06:00 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:08	05:59 20:44	05:40 21:10	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:55	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:58	07:54 16:46
17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:39	07:23 16:57	07:55 16:47
18	07:57 17:15	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:24 16:56	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:36 20:12	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:26	07:08 19:31	07:44 18:35	07:25 16:55	07:56 16:47
20	07:55 17:17	07:18 18:00	07:30 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:59 21:04	06:33 20:25	07:09 19:29	07:46 18:34	07:27 16:54	07:57 16:48
21	07:54 17:19	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:50	05:41 21:13	06:00 21:03	06:34 20:23	07:10 19:28	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	05:51 20:51	05:41 21:13	06:01 21:02	06:35 20:22	07:11 19:26	07:48 18:30	07:29 16:52	07:58 16:49
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:17	05:51 20:52	05:41 21:13	06:02 21:02	06:36 20:20	07:12 19:24	07:49 18:29	07:31 16:52	07:59 16:49
24	07:52 17:23	07:12 18:04	07:22 19:40	06:28 20:19	05:50 20:53	05:41 21:13	06:03 21:01	06:38 20:18	07:14 19:22	07:51 18:27	07:32 16:51	07:59 16:50
25	07:51 17:24	07:10 18:06	07:20 19:42	06:26 20:20	05:49 20:54	05:42 21:13	06:04 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:33 16:50	07:59 16:50
26	07:50 17:25	07:09 18:07	07:18 19:43	06:24 20:21	05:48 20:55	05:42 21:13	06:05 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:50	08:00 16:51
27	07:49 17:27	07:07 18:08	07:17 19:44	06:23 20:22	05:47 20:56	05:42 21:13	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49	08:00 16:52
28	07:48 17:28	07:05 18:10	07:15 19:45	06:21 20:24	05:47 20:57	05:43 21:13	06:07 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:49	08:00 16:52
29	07:47 17:29	07:04 19:47	07:13 20:25	06:20 20:58	05:46 20:58	05:43 21:13	06:08 20:55	06:43 20:10	07:20 19:13	07:57 18:20	07:38 16:48	08:01 16:53
30	07:46 17:31	07:03 19:48	07:11 20:26	06:18 20:59	05:45 20:59	05:44 21:13	06:09 20:54	06:45 20:08	07:21 19:11	07:59 18:18	07:39 16:48	08:01 16:54
31	07:45 17:32	07:02 19:49	07:09 20:27	06:17 21:00	05:45 21:00	05:44 21:13	06:10 20:53	06:46 20:06	08:00 18:17	08:00 16:50	08:01 16:55	08:01 16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H118 - H118

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:01	07:44	07:03	07:29 (97)	07:07	06:17	
	16:56	17:34	18:11	17:35 (96)	19:50	20:27	
2	08:01	07:43	07:02	07:29 (97)	07:06	06:15	
	16:57	17:35	18:12	17:32 (96)	19:52	20:28	
3	08:01	07:42	07:00	07:21 (100)	07:04	06:14	
	16:58	17:36	18:13	07:55 (97)	19:53	20:30	
4	08:01	07:41	06:58	07:19 (100)	07:02	06:12	
	16:59	17:38	18:15	07:53 (97)	19:54	20:31	
5	08:01	07:39	06:57	07:17 (100)	07:00	06:11	
	17:00	17:39	18:16	07:51 (97)	19:55	20:32	
6	08:01	07:38	06:55	07:15 (100)	06:58	19:32 (95)	
	17:01	17:41	18:17	07:49 (97)	19:56	20:33	
7	08:01	07:37	06:53	07:13 (100)	06:57	19:32 (95)	
	17:02	17:42	18:19	07:45 (97)	19:58	20:34	
8	08:01	07:36	07:51	08:12 (100)	06:55	19:31 (95)	
	17:03	17:43	18:20	08:23 (100)	19:59	20:36	
9	08:00	07:34	07:50	08:10 (100)	06:53	19:30 (95)	
	17:04	17:45	19:21	08:22 (100)	20:00	20:37	
10	08:00	07:33	07:48	08:08 (100)	06:51	19:30 (95)	
	17:05	17:46	19:23	08:20 (100)	20:01	20:38	
11	08:00	07:32	07:46	08:10 (100)	06:49	19:31 (95)	
	17:06	17:48	19:24	08:18 (100)	20:03	20:39	
12	08:00	07:30	07:44	06:48	19:31 (95)	06:02	
	17:07	17:49	19:25	20:04	11	19:42 (95)	
13	07:59	07:29	07:42	06:46	19:31 (95)	06:01	
	17:08	17:50	19:27	20:05	12	19:43 (95)	
14	07:59	07:27	07:40	06:44	19:33 (95)	06:00	
	17:10	17:52	19:28	20:06	8	19:41 (95)	
15	07:58	07:26	17:24 (96)	07:39	06:42	05:59	
	17:11	17:53	17:29 (96)	19:29	20:08	20:44	
16	07:58	07:24	17:21 (96)	07:37	06:41	05:57	
	17:12	17:55	17:30 (96)	19:30	20:09	20:45	
17	07:57	07:23	07:44 (97)	07:35	06:39	05:56	
	17:13	17:56	17:32 (96)	19:32	20:10	20:46	
18	07:56	07:21	07:42 (97)	07:33	06:37	05:55	
	17:15	17:57	17:33 (96)	19:33	20:11	20:47	
19	07:56	07:20	07:41 (97)	07:31	06:36	05:54	
	17:16	17:59	17:35 (96)	19:34	20:12	20:48	
20	07:55	07:18	07:39 (97)	07:29	06:34	05:53	
	17:17	18:00	17:36 (96)	19:35	20:14	20:49	
21	07:54	07:17	07:38 (97)	07:28	06:32	05:52	
	17:18	18:00	17:38 (96)	19:37	20:15	20:50	
22	07:54	07:15	07:36 (97)	07:26	06:31	05:51	
	17:20	18:01	17:39 (96)	19:38	20:16	20:51	
23	07:53	07:13	07:34 (97)	07:24	06:29	05:51	
	17:21	18:03	17:40 (96)	19:39	20:17	20:52	
24	07:52	07:12	07:33 (97)	07:22	06:27	05:50	
	17:23	18:04	17:41 (96)	19:40	20:19	20:53	
25	07:51	07:10	07:31 (97)	07:20	06:26	05:49	
	17:24	18:05	17:40 (96)	19:42	20:20	20:54	
26	07:50	07:09	07:29 (97)	07:18	06:24	06:45 (98)	
	17:25	18:07	17:39 (96)	19:43	20:21	3	06:48 (98)
27	07:49	07:07	07:29 (97)	07:17	06:23	06:43 (98)	
	17:27	18:08	17:39 (96)	19:44	20:22	6	06:49 (98)
28	07:48	07:05	07:29 (97)	07:15	06:21	06:42 (98)	
	17:28	18:10	17:37 (96)	19:45	20:23	8	06:50 (98)
29	07:47		07:13	07:13	06:20	06:41 (98)	
	17:29		19:47	20:25	10	06:51 (98)	
30	07:46		07:11	07:11	06:18	06:39 (98)	
	17:31		19:48	20:26	12	06:51 (98)	
31	07:45		07:09	07:09	05:45	05:45	
	17:32		19:49	21:00	21:00	21:00	
Potential sun hours	288	292	369	403	458	464	
Total, worst case		489	242	109	199		
Sun reduction		0.59	0.59	0.61	0.65		
Oper. time red.		0.98	0.98	0.98	0.98		
Wind dir. red.		0.59	0.62	0.59	0.55		
Total reduction		0.34	0.36	0.35	0.35		
Total, real		166	86	38	69		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H118 - H118

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:11	06:44 (98)	06:47	19:29 (95)	07:22	07:01	07:40	
	21:13	20:52	12 06:56 (98)	20:04	11 19:40 (95)	19:09	17:15	16:47	
2	05:45	06:12	06:43 (98)	06:48	19:29 (95)	07:23	07:51 (100)	07:03	07:41
	21:13	20:51	14 06:57 (98)	20:03	9 19:38 (95)	19:07	4 07:55 (100)	17:14	16:47
3	05:45	06:13	06:41 (98)	06:49	19:28 (95)	07:24	07:47 (100)	07:04	07:42
	21:13	20:49	17 06:58 (98)	20:01	8 19:36 (95)	19:05	10 07:57 (100)	17:13	16:47
4	05:46	06:15	06:40 (98)	06:50	19:28 (95)	07:26	07:47 (100)	07:05	07:44
	21:13	20:48	19 06:59 (98)	19:59	6 19:34 (95)	19:03	12 07:59 (100)	17:11	16:46
5	05:46	06:16	06:40 (98)	06:52	19:28 (95)	07:27	07:48 (100)	07:07	07:45
	21:13	20:47	20 07:00 (98)	19:57	4 19:32 (95)	19:01	11 07:59 (100)	17:10	16:46
6	05:47	06:17	06:40 (98)	06:53	19:28 (95)	07:28	07:49 (100)	07:08	07:46
	21:12	20:46	20 07:00 (98)	19:55	3 19:31 (95)	19:00	10 07:59 (100)	17:09	16:46
7	05:48	06:18	06:41 (98)	06:54		07:29	07:50 (100)	07:09	07:47
	21:12	20:44	19 07:00 (98)	19:54		18:56	21 08:23 (97)	17:07	16:46
8	05:48	06:19	06:42 (98)	06:55		07:30	07:52 (100)	07:11	07:48
	21:12	20:43	18 07:00 (98)	19:52		18:54	24 08:26 (97)	17:06	16:46
9	05:49	06:20	06:43 (98)	06:56		07:32	07:53 (100)	07:12	07:49
	21:11	20:42	17 07:00 (98)	19:50		18:52	27 08:27 (97)	17:05	16:45
10	05:50	06:21	06:44 (98)	06:57		07:33	07:54 (100)	07:13	07:50
	21:11	20:40	16 07:00 (98)	19:48		18:51	26 08:28 (97)	17:04	16:45
11	05:51	06:23	06:45 (98)	06:58		07:34	08:03 (97)	07:15	07:50
	21:10	20:39	15 07:00 (98)	19:46		18:49	30 18:04 (96)	17:03	16:45
12	05:52	06:24	06:46 (98)	07:00		07:35	08:03 (97)	07:16	07:51
	21:10	20:37	13 06:59 (98)	19:44		18:47	40 18:08 (96)	17:02	16:46
13	05:52	06:25	06:48 (98)	07:01		07:37	08:02 (97)	07:17	07:52
	21:09	20:36	12 07:00 (98)	19:42		18:45	44 18:09 (96)	17:00	16:46
14	05:53	06:26	06:49 (98)	07:02		07:38	08:01 (97)	07:19	07:53
	21:09	20:34	10 06:59 (98)	19:41		18:44	47 18:10 (96)	16:59	16:46
15	05:54	06:27	06:50 (98)	07:03		07:39	08:01 (97)	07:20	07:54
	21:08	20:33	8 06:58 (98)	19:39		18:42	51 18:12 (96)	16:58	16:46
16	05:55	06:28	06:51 (98)	07:04		07:40	08:02 (97)	07:21	07:54
	21:07	20:31	5 06:56 (98)	19:37		18:40	50 18:12 (96)	16:57	16:46
17	05:56	06:29	06:52 (98)	07:05		07:42	08:03 (97)	07:23	07:55
	21:06	20:30	3 06:55 (98)	19:35		18:39	50 18:12 (96)	16:56	16:46
18	05:57	06:31	07:07	07:07		07:43	08:05 (97)	07:24	07:56
	21:06	20:28	19:33	19:33		18:37	49 18:13 (96)	16:56	16:47
19	05:58	06:32	07:08	07:08		07:44	08:06 (97)	07:25	07:56
	21:05	20:26	19:31	19:31		18:35	45 18:11 (96)	16:55	16:47
20	05:59	06:33	07:09	07:09		07:46	08:07 (97)	07:27	07:57
	21:04	20:25	19:29	19:29		18:34	42 18:09 (96)	16:54	16:48
21	06:00	06:34	07:10	07:10		07:47	08:09 (97)	07:28	07:58
	21:03	20:23	19:27	19:27		18:32	37 18:08 (96)	16:53	16:48
22	06:01	06:35	07:11	07:11		07:48	08:10 (97)	07:29	07:58
	21:02	20:22	19:26	19:26		18:30	32 18:06 (96)	16:52	16:49
23	06:02	06:36	07:12	07:12		07:49	08:11 (97)	07:31	07:59
	21:02	20:20	19:24	19:24		18:29	27 18:04 (96)	16:52	16:49
24	06:03	06:38	07:14	07:14		07:51	08:13 (97)	07:32	07:59
	21:01	20:18	19:22	19:22		18:27	22 18:03 (96)	16:51	16:50
25	06:04	06:39	07:15	07:15		07:52	08:14 (97)	07:33	07:59
	21:00	20:17	19:20	19:20		18:26	14 18:01 (96)	16:50	16:50
26	06:05	06:40	07:16	07:16		07:53	17:51 (96)	07:34	08:00
	20:59	20:15	19:18	19:18		18:24	8 17:59 (96)	16:50	16:51
27	06:06	06:41	07:17	07:17		07:55	17:54 (96)	07:36	08:00
	20:58	20:13	19:16	19:16		18:23	4 17:58 (96)	16:49	16:52
28	06:07	06:42	07:18	07:18		07:56		07:37	08:00
	20:57	20:11	19:14	19:14		18:21		16:49	16:52
29	06:08	06:43	19:33 (95)	07:20		07:57		07:38	08:01
	20:55	20:10	9 19:42 (95)	19:13		18:20		16:48	16:53
30	06:09	06:45	19:31 (95)	07:21		07:59		07:39	08:01
	20:54	20:08	12 19:43 (95)	19:11		18:18		16:48	16:54
31	06:10	06:46 (98)	06:46	19:31 (95)		08:00			08:01
	20:53	6 06:52 (98)	20:06	11 19:42 (95)		18:17			16:55
Potential sun hours	470	435	377	341	289	276			
Total, worst case	6	270	41	737					
Sun reduction	0.76	0.74	0.69	0.63					
Oper. time red.	0.98	0.98	0.98	0.98					
Wind dir. red.	0.55	0.55	0.61	0.60					
Total reduction	0.41	0.40	0.42	0.37					
Total, real	2	109	17	272					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H119 - H119

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:02	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:02	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:40	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:44
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:52	07:28	07:08	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:45	19:55	18:58	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:46
	17:01	17:42	18:19	19:57	20:34	21:05	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:35	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:47
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:31	07:12	07:48
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:07	21:10	20:40	19:48	18:50	17:04	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:38	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:09	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:58	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:46
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:43	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:57	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:41	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:11	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:13	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:57
	17:18	18:00	19:36	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:53	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:30	07:58
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:00	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	20:59	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:58	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:54	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:00
	17:29		19:46	20:25	20:58	21:13	20:55	20:09	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:58	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H147 - H147

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	06:17 20:27	19:53 (93) 20:04 (93)	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47	
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	19:53 (93) 20:05 (93)	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:02	07:23 19:07	07:03 17:14	07:41 16:47	
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:29	19:54 (93) 20:05 (93)	05:43 21:03	05:45 21:13	06:13 20:49	06:49 20:01	07:24 19:05	07:04 17:12	07:42 16:46	
4	08:01 16:58	07:41 17:39	06:58 18:15	07:02 19:54	06:12 20:31	19:55 (93) 20:03 (93)	05:42 21:03	05:46 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:43 16:46	
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	06:11 20:32		05:42 21:04	05:46 21:12	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46	
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:10 20:33		05:42 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 18:58	07:08 17:08	07:46 16:46	
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34		05:41 21:06	05:48 21:12	06:18 20:44	06:54 19:53	07:29 18:56	07:09 17:07	07:47 16:45	
8	08:01 17:02	07:36 17:43	07:51 18:20	06:55 19:59	06:07 20:35		05:41 21:06	05:48 21:11	06:19 20:43	20:06 (93) 19:52	06:55 18:54	07:30 17:06	07:11 16:45	
9	08:00 17:04	07:34 17:45	07:49 19:21	06:53 20:00	06:06 20:37		05:41 21:07	05:49 21:11	06:20 20:41	20:04 (93) 20:13 (93)	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38		05:40 21:08	05:50 21:11	06:21 20:40	20:02 (93) 20:14 (93)	06:57 19:48	07:33 18:51	07:13 17:04	07:49 16:45
11	08:00 17:06	07:31 17:47	07:46 19:24	06:49 20:02	06:03 20:39		05:40 21:08	05:51 21:10	06:22 20:39	20:01 (93) 20:13 (93)	06:58 19:46	07:34 18:49	07:15 17:02	07:50 16:45
12	07:59 17:07	07:30 17:49	07:44 19:25	06:47 20:04	06:02 20:40		05:40 21:09	05:51 21:10	06:23 20:37	20:00 (93) 20:11 (93)	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:01 20:41		05:40 21:09	05:52 21:09	06:25 20:36	19:59 (93) 20:10 (93)	07:01 19:42	07:36 18:45	07:17 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:42		05:40 21:10	05:53 21:08	06:26 20:34	19:59 (93) 20:08 (93)	07:02 19:40	07:38 18:44	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:07	05:58 20:44		05:40 21:10	05:54 21:08	06:27 20:33	20:00 (93) 20:08 (93)	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	05:57 20:45		05:40 21:11	05:55 21:07	06:28 20:31	20:00 (93) 20:06 (93)	07:04 19:37	07:40 18:40	07:21 16:57	07:54 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46		05:40 21:11	05:56 21:06	06:29 20:30	20:00 (93) 20:05 (93)	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:56 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47		05:40 21:12	05:57 21:06	06:30 20:28	20:00 (93) 20:03 (93)	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:35 20:12	05:54 20:48		05:40 21:12	05:58 21:05	06:32 20:26	07:08 19:31	07:44 18:35	07:25 16:55	07:56 16:47	
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49		05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33	07:27 16:54	07:57 16:47	
21	07:54 17:18	07:17 18:00	07:28 19:36	06:32 20:15	05:52 20:50		05:40 21:12	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48	
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	05:51 20:51		05:40 21:13	06:00 21:02	06:35 20:21	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48	
23	07:53 17:21	07:13 18:03	07:24 19:39	06:29 20:17	05:50 20:52		05:41 21:13	06:01 21:01	06:36 20:20	07:12 19:24	07:49 18:29	07:30 16:51	07:59 16:49	
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:18	05:49 20:53	19:55 (93) 19:56 (93)	05:49 20:53	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:51	07:59 16:49	
25	07:51 17:24	07:10 18:05	07:20 19:41	06:26 20:20	05:49 20:54	19:53 (93) 19:56 (93)	05:49 20:54	06:03 21:00	06:39 20:16	07:15 19:20	07:52 18:25	07:33 16:50	07:59 16:50	
26	07:50 17:25	07:08 18:07	07:18 19:43	06:24 20:21	05:48 20:55	19:53 (93) 19:58 (93)	05:48 20:55	06:05 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:51	
27	07:49 17:26	07:07 18:08	07:16 19:44	06:23 20:22	05:47 20:56	19:52 (93) 19:59 (93)	05:47 20:56	06:06 20:57	06:41 20:13	07:17 19:16	07:55 18:22	07:35 16:49	08:00 16:51	
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:23	05:46 20:57	19:52 (93) 20:00 (93)	05:46 20:57	06:07 20:56	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:00 16:52	
29	07:47 17:29		07:13 19:46	06:20 20:25	05:46 20:58	19:51 (93) 20:01 (93)	05:46 20:58	06:08 20:55	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:53	
30	07:46 17:31		07:11 19:48	06:18 20:26	05:45 20:59	19:52 (93) 20:03 (93)	05:45 20:59	06:09 20:54	06:44 20:08	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:54	
31	07:45 17:32		07:09 19:49		05:44 21:00		05:44 21:00	06:10 20:53	06:46 20:06	08:00 18:17		08:01 16:54		
Potential sun hours	288	292	369	403	458		464	470	435	377	341	289	276	
Total, worst case				45	42				91					
Sun reduction				0.61	0.65				0.74					
Oper. time red.				0.98	0.98				0.98					
Wind dir. red.				0.63	0.63				0.63					
Total reduction				0.37	0.40				0.45					
Total, real				17	17				41					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H148 - H148

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:01 16:56	07:44 17:33	07:03 18:11	07:07 19:50	18:59 (93) 20:27	06:17 21:01	05:44 21:13	06:11 20:52	06:47 20:04		07:22 19:09	07:01 17:15	07:40 16:47	
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	18:59 (93) 20:28	06:15 21:02	05:43 21:13	06:12 20:51	06:48 20:02		07:23 19:07	07:03 17:14	07:41 16:47	
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	19:00 (93) 20:29	06:14 21:03	05:43 21:13	06:13 20:49	06:49 20:01		07:24 19:05	07:04 17:12	07:42 16:46	
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	19:01 (93) 20:31	06:12 21:03	05:42 21:13	06:14 20:48	06:50 19:59	19:06 (93) 6	07:25 19:12 (93)	07:05 19:03	07:43 16:46	
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	19:02 (93) 20:32	06:11 21:04	05:42 21:12	06:15 20:47	06:51 19:57	19:01 (93) 15	07:27 19:16 (93)	07:07 19:01	07:45 17:10	16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	19:03 (93) 20:33	06:10 21:05	05:42 21:12	06:17 20:46	06:53 19:55	18:59 (93) 18	07:28 19:17 (93)	07:08 19:00	07:46 17:08	16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	19:04 (93) 20:34	06:08 21:06	05:48 21:12	06:18 20:44	06:54 19:53	18:57 (93) 22	07:29 19:19 (93)	07:09 18:56	07:47 17:07	16:45
8	08:01 17:03	07:36 17:43	07:51 18:20	06:55 19:59	19:09 (93) 20:35	06:07 21:06	05:48 21:11	06:19 20:43	06:55 19:52	18:55 (93) 24	07:30 19:19 (93)	07:11 18:54	07:48 17:06	16:45
9	08:00 17:04	07:34 17:45	07:49 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:41	06:56 19:50	18:54 (93) 26	07:32 19:20 (93)	07:12 18:52	07:49 17:05	16:45
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	18:53 (93) 28	07:33 19:21 (93)	07:13 18:51	07:49 17:04	16:45
11	08:00 17:06	07:32 17:47	07:46 19:24	06:49 20:03	20:39 06:02	05:40 21:08	05:51 21:10	06:22 20:39	06:58 19:46	18:52 (93) 29	07:34 19:21 (93)	07:15 18:49	07:50 17:02	16:45
12	07:59 17:07	07:30 17:49	07:44 19:25	06:48 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	18:52 (93) 28	07:35 19:20 (93)	07:16 18:47	07:51 17:01	16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:01 20:41	05:40 21:09	05:52 21:09	06:25 20:36	07:01 19:42	18:51 (93) 27	07:37 19:18 (93)	07:17 18:45	07:52 17:00	16:45
14	07:59 17:09	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:42	05:40 21:10	05:53 21:08	06:26 20:34	07:02 19:40	18:50 (93) 26	07:38 19:16 (93)	07:19 18:44	07:53 16:59	16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:07	05:58 20:44	05:40 21:10	05:54 21:08	06:27 20:33	07:03 19:39	18:50 (93) 24	07:39 19:14 (93)	07:20 18:42	07:54 16:58	16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	18:50 (93) 22	07:40 19:12 (93)	07:21 18:40	07:54 16:57	16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:06	06:29 20:30	07:05 19:35	18:50 (93) 20	07:42 19:10 (93)	07:23 18:38	07:55 16:56	16:46
18	07:56 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:30 20:28	07:06 19:33	18:51 (93) 18	07:43 19:09 (93)	07:24 18:37	07:56 16:55	16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:26	07:08 19:31	18:51 (93) 16	07:44 19:07 (93)	07:25 18:35	07:56 16:55	16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	18:52 (93) 13	07:45 19:05 (93)	07:27 18:33	07:57 16:54	16:47
21	07:54 17:18	07:17 18:00	07:28 19:37	19:11 (93) 06:32	06:32 20:15	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	18:53 (93) 10	07:47 19:03 (93)	07:28 18:32	07:58 16:53	16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	19:16 (93) 06:31	20:15 06:31	05:40 21:13	05:59 21:02	06:35 20:21	07:11 19:25	18:55 (93) 6	07:48 19:01 (93)	07:29 18:30	07:58 16:52	16:48
23	07:53 17:21	07:13 18:03	07:24 19:39	19:17 (93) 06:29	20:16 06:29	05:40 21:13	05:51 21:01	06:36 20:20	07:12 19:24	19:01 (93) 6	07:49 18:51 (93)	07:31 18:37	07:59 16:51	16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	19:18 (93) 06:27	20:17 06:27	05:41 21:13	06:02 21:01	06:37 20:20	07:13 19:24		07:51 18:29	07:32 16:51	07:59 16:49	
25	07:51 17:24	07:10 18:05	07:20 19:41	19:19 (93) 06:26	20:19 06:26	05:41 21:13	06:04 21:00	06:39 20:16	07:15 19:20		07:52 18:25	07:33 16:50	07:59 16:50	
26	07:50 17:25	07:08 18:07	07:18 19:43	19:02 (93) 06:24	20:24 06:24	05:42 21:13	06:05 21:00	06:40 20:16	07:16 19:20		07:53 18:25	07:34 16:50	08:00 16:50	
27	07:49 17:26	07:07 18:08	07:16 19:44	19:02 (93) 06:23	20:23 06:23	05:42 21:13	06:06 20:59	06:41 20:15	07:17 19:18		07:55 18:24	07:35 16:49	08:00 16:51	
28	07:48 17:28	07:05 18:09	07:15 19:45	19:01 (93) 06:21	20:23 06:21	05:42 21:13	06:07 20:56	06:42 20:11	07:18 19:14		07:56 18:21	07:37 16:48	08:00 16:52	
29	07:47 17:29	07:13 19:46	07:13 25	19:00 (93) 06:20	20:25 06:20	05:43 21:13	06:08 20:55	06:43 20:10	07:19 19:12		07:57 18:19	07:38 16:48	08:01 16:53	
30	07:46 17:31	07:11 19:48	07:11 26	19:00 (93) 06:18	20:26 06:18	05:43 21:13	06:09 20:54	06:44 20:08	07:21 19:11		07:59 18:18	07:39 16:47	08:01 16:54	
31	07:45 17:32	07:09 19:49	07:09 28	18:59 (93) 19:27 (93)	06:18 06:18	05:44 21:00	06:10 20:53	06:46 20:06			08:00 18:17	07:40 16:54	08:01 16:54	
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276		
Total, worst case			200	169					378					
Sun reduction			0.59	0.61					0.69					
Oper. time red.			0.98	0.98					0.98					
Wind dir. red.			0.59	0.59					0.59					
Total reduction			0.34	0.35					0.40					
Total, real			68	60					151					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H149 - H149

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	15:44 (91)	07:44	07:03	07:07	06:17
	16:56	17	16:01 (91)	17:33	18:11	19:50
2	08:01	15:45 (91)	07:43	07:02	07:05	06:15
	16:57	16	16:01 (91)	17:35	18:12	19:51
3	08:01	15:46 (91)	07:42	07:00	07:04	06:14
	16:57	15	16:01 (91)	17:36	18:13	19:53
4	08:01	15:46 (91)	07:41	06:58	07:02	06:12
	16:58	14	16:00 (91)	17:38	18:15	19:54
5	08:01	15:48 (91)	07:39	06:57	17:48 (89)	07:00
	16:59	11	15:59 (91)	17:39	18:16	19:55
6	08:01	15:50 (91)	07:38	06:55	17:45 (89)	06:58
	17:00	8	15:58 (91)	17:40	18:17	19:56
7	08:01	15:54 (91)	07:37	06:53	17:43 (89)	06:56
	17:02	2	15:56 (91)	17:42	18:19	19:58
8	08:01	17:43	07:36	07:51	18:43 (89)	06:55
	17:03	17:43	18:20	16	18:59 (89)	19:59
9	08:00	07:34	07:49	18:42 (89)	06:53	06:06
	17:04	17:45	19:21	18	19:00 (89)	20:00
10	08:00	07:33	07:48	18:41 (89)	06:51	06:04
	17:05	17:46	19:23	20	19:01 (89)	20:01
11	08:00	07:32	07:46	18:40 (89)	06:49	06:03
	17:06	17:47	19:24	22	19:02 (89)	20:03
12	08:00	07:30	07:44	18:39 (89)	06:48	06:02
	17:07	17:49	19:25	25	19:04 (89)	20:04
13	07:59	07:29	07:42	18:40 (89)	06:46	06:01
	17:08	17:50	19:26	25	19:05 (89)	20:05
14	07:59	07:27	07:40	18:40 (89)	06:44	06:00
	17:09	17:52	19:28	24	19:04 (89)	20:06
15	07:58	07:26	07:39	18:40 (89)	06:42	19:33 (90)
	17:11	17:53	19:29	23	19:03 (89)	20:07
16	07:58	07:24	07:37	18:40 (89)	06:41	19:28 (90)
	17:12	17:54	19:30	22	19:02 (89)	20:09
17	07:57	07:23	07:35	18:41 (89)	06:39	19:25 (90)
	17:13	17:56	19:32	20	19:01 (89)	20:10
18	07:56	07:21	07:33	18:42 (89)	06:37	19:23 (90)
	17:14	17:57	19:33	17	18:59 (89)	20:11
19	07:56	07:20	07:31	18:44 (89)	06:36	19:21 (90)
	17:16	17:59	19:34	12	18:56 (89)	20:12
20	07:55	07:18	07:29	18:50 (89)	06:34	19:19 (90)
	17:17	18:00	19:35	1	18:51 (89)	20:14
21	07:54	07:17	07:28	06:32	19:19 (90)	05:52
	17:18	18:00	19:37	20:15	34	19:53 (90)
22	07:54	07:15	07:26	06:31	19:17 (90)	05:51
	17:20	18:01	19:38	20:16	36	19:53 (90)
23	07:53	07:13	07:24	06:29	19:16 (90)	05:50
	17:21	18:03	19:39	20:17	38	19:54 (90)
24	07:52	07:12	07:22	06:27	19:16 (90)	05:50
	17:22	18:04	19:40	20:19	40	19:56 (88)
25	07:51	07:10	07:20	06:26	19:14 (90)	05:49
	17:24	18:05	19:42	20:20	42	19:56 (88)
26	07:50	07:09	07:18	06:24	19:14 (90)	05:48
	17:25	18:07	19:43	20:21	44	19:58 (88)
27	07:49	07:07	07:17	06:23	19:13 (90)	05:47
	17:26	18:08	19:44	20:22	46	19:59 (88)
28	07:48	07:05	07:15	06:21	19:13 (90)	05:46
	17:28	18:09	19:45	20:23	47	20:00 (88)
29	07:47	07:13	07:23	06:20	19:13 (90)	05:46
	17:29	18:10	19:47	20:25	48	20:01 (88)
30	07:46	07:11	07:21	06:18	19:13 (90)	05:45
	17:31	18:11	19:48	20:26	50	20:03 (88)
31	07:45	07:10	07:20	06:17	19:13 (90)	05:45
	17:32	18:12	19:49	20:27	52	20:04 (88)
Potential sun hours	288	292	369	403	458	464
Total, worst case	83		277	562	658	136
Sun reduction	0.57		0.59	0.61	0.65	0.70
Oper. time red.	0.98		0.98	0.98	0.98	0.98
Wind dir. red.	0.56		0.55	0.62	0.62	0.56
Total reduction	0.31		0.32	0.37	0.39	0.38
Total, real	26		88	208	259	52

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H149 - H149

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December					
1	05:44	06:08 (86)	06:11	19:27 (90)	06:47	07:22	18:19 (89)	07:01	07:40		
	21:13	5 06:13 (86)	20:52	33 20:00 (90)	20:04	19:09	25 18:44 (89)	17:15	16:47		
2	05:44	06:09 (86)	06:12	19:27 (90)	06:48	07:23	18:19 (89)	07:03	07:41		
	21:13	4 06:13 (86)	20:51	35 20:02 (90)	20:03	19:07	23 18:42 (89)	17:14	16:47		
3	05:45	06:09 (86)	06:13	19:26 (90)	06:49	07:24	18:18 (89)	07:04	07:42		
	21:13	3 06:12 (86)	20:49	37 20:03 (90)	20:01	19:05	22 18:40 (89)	17:12	16:46		
4	05:46	06:10 (86)	06:14	19:25 (90)	06:50	07:25	18:18 (89)	07:05	07:44		
	21:13	3 06:13 (86)	20:48	38 20:03 (90)	19:59	19:03	20 18:38 (89)	17:11	16:46		
5	05:46	06:11 (86)	06:16	19:25 (90)	06:51	07:27	18:19 (89)	07:07	07:45		15:39 (91)
	21:13	2 06:13 (86)	20:47	38 20:03 (90)	19:57	19:01	17 18:36 (89)	17:10	16:46	2	15:41 (91)
6	05:47	06:11 (86)	06:17	19:24 (90)	06:53	07:28	18:20 (89)	07:08	07:46		15:36 (91)
	21:12	1 06:12 (86)	20:46	40 20:04 (90)	19:55	19:00	14 18:34 (89)	17:09	16:46	8	15:44 (91)
7	05:48		06:18	19:23 (90)	06:54	07:29	18:20 (89)	07:09	07:47		15:35 (91)
	21:12		20:44	41 20:04 (90)	19:53	18:56	12 18:32 (89)	17:07	16:46	11	15:46 (91)
8	05:48		06:19	19:23 (90)	06:55	07:30	18:22 (89)	07:11	07:48		15:34 (91)
	21:12		20:43	41 20:04 (90)	19:52	18:54	8 18:30 (89)	17:06	16:45	14	15:48 (91)
9	05:49		06:20	19:22 (90)	06:56	07:32	18:25 (89)	07:12	07:49		15:34 (91)
	21:11		20:41	47 20:09 (88)	19:50	18:52	4 18:29 (89)	17:05	16:45	15	15:49 (91)
10	05:50		06:21	19:22 (90)	06:57	07:33		07:13	07:50		15:34 (91)
	21:11		20:40	48 20:10 (88)	19:48	18:51		17:04	16:45	16	15:50 (91)
11	05:51		06:22	19:21 (90)	06:58	07:34		07:15	07:50		15:34 (91)
	21:10		20:39	50 20:11 (88)	19:46	18:49		17:03	16:45	17	15:51 (91)
12	05:51		06:24	19:21 (90)	07:00	07:35		07:16	07:51		15:34 (91)
	21:10		20:37	50 20:11 (88)	19:44	18:47		17:01	16:45	18	15:52 (91)
13	05:52		06:25	19:21 (90)	07:01	07:37		07:17	07:52		15:34 (91)
	21:09		20:36	49 20:10 (88)	19:42	18:45		17:00	16:46	19	15:53 (91)
14	05:53		06:26	19:21 (90)	07:02	07:38		07:19	07:53		15:33 (91)
	21:09		20:34	48 20:09 (88)	19:41	18:44		16:59	16:46	20	15:35 (91)
15	05:54		06:27	19:21 (90)	07:03	07:39		07:20	07:54		15:34 (91)
	21:08		20:33	47 20:08 (88)	19:39	18:42		16:58	16:46	20	15:54 (91)
16	05:55		06:28	19:21 (90)	07:04	07:40		07:21	07:54		15:34 (91)
	21:07		20:31	45 20:06 (88)	19:37	18:40		16:57	16:46	21	15:55 (91)
17	05:56		06:29	19:21 (90)	07:05	07:42		07:23	07:55		15:35 (91)
	21:06		20:30	44 20:05 (88)	19:35	18:38		16:56	16:46	21	15:56 (91)
18	05:57		06:31	19:21 (90)	07:07	07:43		07:24	07:56		15:35 (91)
	21:06		20:28	42 20:03 (88)	19:33	18:37		16:55	16:47	21	15:56 (91)
19	05:58		06:32	19:21 (90)	07:08	07:44		07:25	07:56		15:35 (91)
	21:05		20:26	40 20:01 (90)	19:31	18:35		16:55	16:47	22	15:57 (91)
20	05:59		06:33	19:22 (90)	07:09	07:45		07:27	07:57		15:35 (91)
	21:04		20:25	38 20:00 (90)	19:29	18:33		16:54	16:47	22	15:57 (91)
21	06:00		06:34	19:22 (90)	07:10	07:47		07:28	07:58		15:36 (91)
	21:03		20:23	36 19:58 (90)	19:27	18:32		16:53	16:48	22	15:58 (91)
22	06:01		06:35	19:23 (90)	07:11	07:48		07:29	07:58		15:36 (91)
	21:02		20:22	33 19:56 (90)	19:26	18:30		16:52	16:48	22	15:58 (91)
23	06:02		06:36	19:24 (90)	07:12	07:49		07:31	07:59		15:37 (91)
	21:02		20:20	31 19:55 (90)	19:24	18:29		16:51	16:49	22	15:59 (91)
24	06:03		06:37	19:25 (90)	07:14	07:51		07:32	07:59		15:37 (91)
	21:01	9 19:48 (90)	20:18	29 19:54 (90)	19:22	10 18:39 (89)	18:27	16:51	16:50	22	15:59 (91)
25	06:04		06:39	19:27 (90)	07:15	07:52		07:33	07:59		15:37 (91)
	21:00	14 19:51 (90)	20:16	25 19:52 (90)	19:20	15 18:41 (89)	18:26	16:50	16:50	22	15:59 (91)
26	06:05		06:40	19:28 (90)	07:16	07:53		07:34	08:00		15:39 (91)
	20:59	20 19:54 (90)	20:15	22 19:50 (90)	19:18	19 18:43 (89)	18:24	16:50	16:51	21	16:00 (91)
27	06:06		06:41	19:30 (90)	07:17	07:55		07:36	08:00		15:39 (91)
	20:58	22 19:55 (90)	20:13	18 19:48 (90)	19:16	21 18:43 (89)	18:22	16:49	16:51	21	16:00 (91)
28	06:07		06:42	19:34 (90)	07:18	07:56		07:37	08:00		15:40 (91)
	20:56	26 19:57 (90)	20:11	9 19:43 (90)	19:14	23 18:44 (89)	18:21	16:48	16:52	20	16:00 (91)
29	06:08		06:43	19:30 (90)	07:19	07:57		07:38	08:01		15:40 (91)
	20:55	28 19:58 (90)	20:10		19:12	24 18:44 (89)	18:20	16:48	16:53	20	16:00 (91)
30	06:09		06:44	19:29 (90)	07:20	07:59		07:39	08:01		15:42 (91)
	20:54	30 19:59 (90)	20:08		19:11	24 18:44 (89)	18:18	16:47	16:54	19	16:01 (91)
31	06:10		06:46			08:00		08:01	08:01		15:43 (91)
	20:53	32 20:00 (90)	20:06			18:17		16:55	16:55	18	16:01 (91)
Potential sun hours	470	435		377		341		289	276		
Total, worst case	199		1054		136		145			496	
Sun reduction	0.76		0.74		0.69		0.63			0.49	
Oper. time red.	0.98		0.98		0.98		0.98			0.98	
Wind dir. red.	0.62		0.62		0.55		0.55			0.56	
Total reduction	0.46		0.45		0.37		0.34			0.27	
Total, real	91		473		50		49			133	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H150 - H150

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June			
1	08:01	14:26 (90)	07:44	07:03	07:07	08:14 (93)	06:17	06:38 (85)	05:44
	16:56	25 14:51 (90)	17:33	18:11	19:50	4 08:18 (93)	20:27	15 06:53 (85)	21:01
2	08:01	14:28 (90)	07:43	07:02	07:06		06:15	06:36 (85)	05:43
	16:57	22 14:50 (90)	17:35	18:12	19:51		20:28	16 06:52 (85)	21:02
3	08:01	14:29 (90)	07:42	07:00	07:04		06:14	06:35 (84)	05:43
	16:57	21 14:50 (90)	17:36	18:13	19:53		20:30	17 06:52 (84)	21:03
4	08:01	14:30 (90)	07:41	06:58	07:02		06:12	06:33 (84)	05:42
	16:58	18 14:48 (90)	17:38	18:15	19:54		20:31	19 06:52 (84)	21:03
5	08:01	14:33 (90)	07:39	06:57	07:00		06:11	06:32 (84)	05:42
	16:59	14 14:47 (90)	17:39	18:16	19:55		20:32	21 06:53 (84)	21:04
6	08:01	14:37 (90)	07:38	06:55	06:58		06:10	06:31 (84)	05:42
	17:00	7 14:44 (90)	17:40	18:17	19:56		20:33	22 06:53 (84)	21:05
7	08:01		07:37	06:53	07:21 (93)	06:56	06:08	06:30 (84)	05:41
	17:02		17:42	18:19	5 07:26 (93)	19:58	20:34	24 06:54 (84)	21:06
8	08:01		07:36	07:51	08:16 (93)	06:55	06:07	06:28 (84)	05:41
	17:03		17:43	18:20	16 08:32 (93)	19:59	20:36	25 06:53 (84)	21:06
9	08:01		07:34	07:49	08:13 (93)	06:53	06:06	06:27 (84)	05:41
	17:04		17:45	19:21	22 08:35 (93)	20:00	20:37	26 06:53 (84)	21:07
10	08:00		07:33	07:48	08:10 (93)	06:51	06:04	06:27 (84)	05:40
	17:05		17:46	19:23	26 08:36 (93)	20:01	20:38	26 06:53 (84)	21:08
11	08:00		07:32	07:46	08:08 (93)	06:49	06:03	06:27 (84)	05:40
	17:06		17:48	19:24	29 08:37 (93)	20:03	20:39	26 06:53 (84)	21:08
12	08:00		07:30	07:44	08:07 (93)	06:48	06:02	06:28 (84)	05:40
	17:07		17:49	19:25	31 08:38 (93)	20:04	20:40	25 06:53 (84)	21:09
13	07:59		07:29	07:42	08:06 (93)	06:46	06:01	06:27 (84)	05:40
	17:08		17:50	19:26	34 08:40 (93)	20:05	20:41	24 06:51 (84)	21:09
14	07:59		07:27	07:40	08:05 (93)	06:44	06:00	06:28 (84)	05:40
	17:09		17:52	19:28	41 19:07 (88)	20:06	20:43	23 06:51 (84)	21:10
15	07:58		07:26	07:39	08:04 (93)	06:42	05:58	06:29 (84)	05:40
	17:11		17:53	19:29	46 19:08 (88)	20:08	20:44	21 06:50 (84)	21:10
16	07:58		07:24	07:37	08:03 (93)	06:41	05:57	06:29 (84)	05:40
	17:12		17:54	19:30	50 19:09 (88)	20:09	20:45	21 06:50 (84)	21:11
17	07:57		07:23	07:35	08:02 (93)	06:39	05:56	06:30 (84)	05:40
	17:13		17:56	19:32	54 19:10 (88)	20:10	20:46	19 06:49 (84)	21:11
18	07:56		07:21	07:33	08:01 (93)	06:37	05:55	06:31 (84)	05:40
	17:14		17:57	19:33	56 19:11 (88)	20:11	20:47	17 06:48 (84)	21:12
19	07:56		07:20	07:31	08:01 (93)	06:36	05:54	06:32 (84)	05:40
	17:16		17:59	19:34	58 19:12 (88)	20:12	20:48	14 06:46 (84)	21:12
20	07:55		07:18	07:29	08:01 (93)	06:34	05:53	06:35 (84)	05:40
	17:17		18:00	19:35	61 19:15 (88)	20:14	20:49	11 06:46 (84)	21:12
21	07:54		07:17	07:28	08:01 (93)	06:32	05:52	06:38 (84)	05:40
	17:18		18:00	19:37	62 19:16 (88)	20:15	20:50	5 06:43 (84)	21:13
22	07:54		07:15	07:26	08:01 (93)	06:31	05:51		05:41
	17:20		18:01	19:38	61 19:16 (88)	20:16	20:51		21:13
23	07:53		07:13	07:24	08:00 (93)	06:29	06:50 (85)	05:50	05:41
	17:21		18:03	19:39	60 19:15 (88)	20:17	2 06:52 (85)	20:52	21:13
24	07:52		07:12	07:22	08:01 (93)	06:27	06:48 (85)	05:50	05:41
	17:22		18:04	19:40	55 19:13 (88)	20:19	4 06:52 (85)	20:53	21:13
25	07:51		07:10	07:20	08:01 (93)	06:26	06:46 (85)	05:49	05:41
	17:24		18:05	19:42	53 19:12 (88)	20:20	7 06:53 (85)	20:54	21:13
26	07:50		07:09	07:18	08:01 (93)	06:24	06:45 (85)	05:48	05:42
	17:25		18:07	19:43	48 19:10 (88)	20:21	9 06:54 (85)	20:55	21:13
27	07:49		07:07	07:17	08:03 (93)	06:23	06:43 (85)	05:47	05:42
	17:26		18:08	19:44	40 19:08 (88)	20:22	10 06:53 (85)	20:56	21:13
28	07:48		07:05	07:15	08:04 (93)	06:21	06:42 (85)	05:46	05:42
	17:28		18:09	19:45	28 08:32 (93)	20:23	12 06:54 (85)	20:57	21:14
29	07:47			07:13	08:05 (93)	06:20	06:40 (85)	05:46	05:43
	17:29			19:47	25 08:30 (93)	20:25	13 06:53 (85)	20:58	21:13
30	07:46			07:11	08:06 (93)	06:18	06:39 (85)	05:45	05:43
	17:31			19:48	21 08:27 (93)	20:26	14 06:53 (85)	20:59	21:13
31	07:45			07:09	08:09 (93)			05:45	
	17:32			19:49	15 08:24 (93)			21:00	
Potential sun hours	288	292	369	403	458	464			
Total, worst case	107		997	75	417				
Sun reduction	0.57		0.59	0.61	0.65				
Oper. time red.	0.98		0.98	0.98	0.98				
Wind dir. red.	0.62		0.61	0.55	0.55				
Total reduction	0.35		0.35	0.33	0.35				
Total, real	37		350	25	146				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H150 - H150

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:37 (84)	06:47	07:22	07:46 (93)
	21:13	20:52	25 07:02 (84)	20:04	19:09	32 08:18 (93)
2	05:44	06:12	06:38 (84)	06:48	07:23	07:46 (93)
	21:13	20:51	25 07:03 (84)	20:03	19:07	31 08:17 (93)
3	05:45	06:13	06:38 (84)	06:49	07:24	07:47 (93)
	21:13	20:50	26 07:04 (84)	20:01	19:05	28 08:15 (93)
4	05:46	06:14	06:38 (84)	06:50	07:26	07:49 (93)
	21:13	20:48	25 07:03 (84)	19:59	19:03	23 08:12 (93)
5	05:46	06:16	06:39 (84)	06:51	07:27	07:51 (93)
	21:13	20:47	24 07:03 (84)	19:57	19:01	19 08:10 (93)
6	05:47	06:17	06:40 (84)	06:53	07:28	07:54 (93)
	21:12	20:46	23 07:03 (84)	19:55	19:00	12 08:06 (93)
7	05:48	06:18	06:41 (84)	06:54	07:29	07:09
	21:12	20:44	22 07:03 (84)	19:54	18:56	17:07 16:46 13 14:33 (90)
8	05:48	06:19	06:42 (84)	06:55	07:30	07:11 07:48 14:19 (90)
	21:12	20:43	20 07:02 (84)	19:52	18:54	17:06 16:45 17 14:36 (90)
9	05:49	06:20	06:43 (84)	06:56	07:32	07:12 07:49 14:18 (90)
	21:11	20:42	18 07:01 (84)	19:50	18:52	17:05 16:45 20 14:38 (90)
10	05:50	06:21	06:44 (84)	06:57	07:33	07:13 07:50 14:17 (90)
	21:11	20:40	17 07:01 (84)	19:48	18:51	17:04 16:45 22 14:39 (90)
11	05:51	06:22	06:45 (85)	06:58	07:34	07:15 07:50 14:16 (90)
	21:10	20:39	16 07:01 (85)	19:46	18:49	17:03 16:45 25 14:41 (90)
12	05:51	06:24	06:46 (85)	07:00	08:01 (93)	07:35 07:16 07:51 14:16 (90)
	21:10	20:37	15 07:01 (85)	19:44	15 08:16 (93)	18:47 17:01 16:45 26 14:42 (90)
13	05:52	06:25	06:47 (85)	07:01	07:58 (93)	07:37 07:17 07:52 14:16 (90)
	21:09	20:36	14 07:01 (85)	19:42	20 08:18 (93)	18:45 17:00 16:46 27 14:43 (90)
14	05:53	06:26	06:49 (85)	07:02	07:55 (93)	07:38 07:19 07:53 14:15 (90)
	21:09	20:34	13 07:02 (85)	19:41	25 08:20 (93)	18:44 16:59 16:46 29 14:44 (90)
15	05:54	06:27	06:50 (85)	07:03	07:53 (93)	07:39 07:20 07:54 14:15 (90)
	21:08	20:33	12 07:02 (85)	19:39	28 08:21 (93)	18:42 16:58 16:46 30 14:45 (90)
16	05:55	06:28	06:51 (85)	07:04	07:51 (93)	07:40 07:21 07:54 14:15 (90)
	21:07	20:31	10 07:01 (85)	19:37	38 18:55 (88)	18:40 16:57 16:46 31 14:46 (90)
17	05:56	06:29	06:52 (85)	07:05	07:50 (93)	07:42 07:23 07:55 14:16 (90)
	21:07	20:30	8 07:00 (85)	19:35	47 18:58 (88)	18:38 16:56 16:46 31 14:47 (90)
18	05:57	06:31	06:53 (85)	07:07	07:49 (93)	07:43 07:24 07:56 14:15 (90)
	21:06	20:28	6 06:59 (85)	19:33	52 19:00 (88)	18:37 16:55 16:47 32 14:47 (90)
19	05:58	06:32	06:54 (85)	07:08	07:48 (93)	07:44 07:25 07:56 14:16 (90)
	21:05	20:26	4 06:58 (85)	19:31	56 19:01 (88)	18:35 16:55 16:47 32 14:48 (90)
20	05:59	06:33	06:55 (85)	07:09	07:47 (93)	07:45 07:27 07:57 14:16 (90)
	21:04	20:25	1 06:56 (85)	19:29	59 19:01 (88)	18:34 16:54 16:47 32 14:48 (90)
21	06:00	06:34	07:10	07:46 (93)	07:47 07:28 07:58 14:17 (90)	
	21:03	20:23	19:27	60 19:01 (88)	18:32 16:53 16:48 32 14:49 (90)	
22	06:01	06:35	07:11	07:45 (93)	07:48 07:29 07:58 14:17 (90)	
	21:02	20:22	19:26	62 19:01 (88)	18:30 16:52 16:48 32 14:49 (90)	
23	06:02	06:36	07:12	07:45 (93)	07:49 07:31 07:59 14:18 (90)	
	21:02	8 06:54 (84)	20:20	19:24	60 18:58 (88)	18:29 16:51 16:49 32 14:50 (90)
24	06:03	06:37	07:14	07:45 (93)	07:51 07:32 07:59 14:18 (90)	
	21:01	12 06:56 (84)	20:18	19:22	59 18:57 (88)	18:27 16:51 16:50 32 14:50 (90)
25	06:04	06:39	07:15	07:45 (93)	07:52 07:33 08:00 14:18 (90)	
	21:00	15 06:57 (84)	20:17	19:20	56 18:55 (88)	18:26 16:50 16:50 32 14:50 (90)
26	06:05	06:41 (84)	06:40	07:16	07:44 (93)	07:53 07:34 08:00 14:20 (90)
	20:59	18 06:59 (84)	20:15	19:18	54 18:53 (88)	18:24 16:50 16:51 31 14:51 (90)
27	06:06	06:40 (84)	06:41	07:17	07:44 (93)	07:55 07:36 08:00 14:20 (90)
	20:58	20 07:00 (84)	20:13	19:16	51 18:51 (88)	18:22 16:49 16:51 31 14:51 (90)
28	06:07	06:40 (84)	06:42	07:18	07:44 (93)	07:56 07:37 08:00 14:21 (90)
	20:57	20 07:00 (84)	20:11	19:14	47 18:49 (88)	18:21 16:48 16:52 30 14:51 (90)
29	06:08	06:39 (84)	06:43	07:19	07:44 (93)	07:57 07:38 08:01 14:22 (90)
	20:55	22 07:01 (84)	20:10	19:12	43 18:47 (88)	18:20 16:48 16:53 29 14:51 (90)
30	06:09	06:38 (84)	06:44	07:21	07:45 (93)	07:59 07:39 08:01 14:23 (90)
	20:54	24 07:02 (84)	20:08	19:11	38 18:46 (88)	18:18 16:47 16:54 29 14:52 (90)
31	06:10	06:38 (84)	06:46	08:00	08:00 08:01 14:25 (90)	
	20:53	24 07:02 (84)	20:06	18:17	16:55 26 14:51 (90)	
Potential sun hours	470	435	377	341	289	276
Total, worst case	163	324	870	145	709	
Sun reduction	0.76	0.74	0.69	0.63	0.49	
Oper. time red.	0.98	0.98	0.98	0.98	0.98	
Wind dir. red.	0.55	0.55	0.61	0.62	0.62	
Total reduction	0.41	0.40	0.41	0.38	0.30	
Total, real	67	129	357	55	211	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H151 - H151

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of values: 0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of values: 948 364 341 373 483 625 1,207 923 579 685 869 1,169 8,564

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (January-December) and rows for each day of the month, including sunrise/sunset times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix with 4 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H152 - H152

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	07:44	07:04	07:08	06:17	05:44
	16:56	17:34	18:11	19:50	20:27	21:01
2	08:01	07:43	07:02	07:06	06:15	05:44
	16:57	17:35	18:12	19:52	20:28	21:02
3	08:01	07:42	07:00	07:04	06:14	05:43
	16:58	17:36	18:14	19:53	20:30	21:03
4	08:01	08:26 (95)	07:41	06:58	07:02	06:13
	16:59	2 08:28 (95)	17:38	18:15	19:54	20:31
5	08:01	08:25 (95)	07:40	06:57	07:00	06:11
	17:00	4 08:29 (95)	17:39	18:16	19:55	20:32
6	08:01	08:25 (95)	07:38	06:55	06:58	06:10
	17:01	5 08:30 (95)	17:41	18:18	19:57	20:33
7	08:01	08:25 (95)	07:37	06:53	06:57	07:17 (87)
	17:02	7 08:32 (95)	17:42	18:19	19:58	2 07:19 (87)
8	08:01	08:25 (95)	07:36	07:51	06:55	07:15 (87)
	17:03	8 08:33 (95)	17:43	18:20	19:59	5 07:20 (87)
9	08:01	08:24 (95)	07:34	07:50	06:53	7 07:13 (87)
	17:04	10 08:34 (95)	17:45	19:21	20:00	7 07:20 (87)
10	08:00	08:24 (95)	07:33	07:48	06:51	7 07:11 (87)
	17:05	11 08:35 (95)	17:46	19:23	20:01	8 07:19 (87)
11	08:00	08:24 (95)	07:32	07:46	06:50	7 07:10 (87)
	17:06	12 08:36 (95)	17:48	19:24	20:03	10 07:20 (87)
12	08:00	08:23 (95)	07:30	07:44	06:48	7 07:08 (87)
	17:07	14 08:37 (95)	17:49	19:25	20:04	11 07:19 (87)
13	07:59	08:23 (95)	07:29	07:42	06:46	7 07:06 (87)
	17:08	15 08:38 (95)	17:50	19:27	20:05	12 07:18 (87)
14	07:59	08:22 (95)	07:27	07:41	06:44	7 07:05 (87)
	17:10	16 08:38 (95)	17:52	19:28	20:06	11 07:16 (87)
15	07:58	08:21 (95)	07:26	07:39	06:43	7 07:07 (87)
	17:11	18 08:39 (95)	17:53	19:29	20:08	7 07:14 (87)
16	07:58	08:21 (95)	07:25	07:37	06:41	
	17:12	19 08:40 (95)	17:55	19:30	20:09	
17	07:57	08:20 (95)	07:23	07:35	06:39	
	17:13	20 08:40 (95)	17:56	19:32	20:10	
18	07:57	08:19 (95)	07:21	07:33	06:37	
	17:15	21 08:40 (95)	17:57	19:33	20:11	
19	07:56	08:19 (95)	07:20	07:31	06:36	
	17:16	22 08:41 (95)	17:59	19:34	20:13	
20	07:55	08:18 (95)	07:18	07:30	06:34	
	17:17	23 08:41 (95)	18:00	19:35	20:14	
21	07:55	08:18 (95)	07:17	07:28	06:32	
	17:19	23 08:41 (95)	18:00	19:37	20:15	
22	07:54	08:19 (95)	07:15	07:26	06:31	
	17:20	22 08:41 (95)	18:02	19:38	20:16	
23	07:53	08:19 (95)	07:14	07:24	06:29	
	17:21	22 08:41 (95)	18:03	19:39	20:17	
24	07:52	08:20 (95)	07:12	07:22	06:28	
	17:23	22 08:42 (95)	18:04	19:40	20:19	
25	07:51	08:21 (95)	07:10	07:20	06:26	
	17:24	21 08:42 (95)	18:06	19:42	20:20	
26	07:50	08:22 (95)	07:09	07:19	06:24	
	17:25	20 08:42 (95)	18:07	19:43	20:21	
27	07:49	08:23 (95)	07:07	07:17	06:23	
	17:27	18 08:41 (95)	18:08	19:44	20:22	
28	07:48	08:24 (95)	07:05	07:15	06:21	
	17:28	16 08:40 (95)	18:10	19:45	20:24	
29	07:47	08:26 (95)		07:13	06:20	
	17:29	13 08:39 (95)		19:47	20:25	
30	07:46	08:27 (95)		07:11	06:18	
	17:31	9 08:36 (95)		19:48	20:26	
31	07:45			07:09		
	17:32			19:49		
Potential sun hours	288	292	369	403	458	464
Total, worst case	413			73		
Sun reduction	0.57			0.61		
Oper. time red.	0.98			0.98		
Wind dir. red.	0.69			0.56		
Total reduction	0.39			0.34		
Total, real	160			24		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H152 - H152

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:44 21:13	06:11 20:52	06:47 20:04	07:09 (87) 19:09	07:22 17:15	07:40 16:47	08:06 (95) 12 08:18 (95)
2	05:45 21:13	06:12 20:51	06:48 20:03	07:10 (87) 19:07	07:23 17:14	07:03 16:47	08:07 (95) 11 08:18 (95)
3	05:45 21:13	06:14 20:50	06:49 20:01	07:11 (87) 19:05	07:24 17:13	07:04 16:47	08:08 (95) 10 08:18 (95)
4	05:46 21:13	06:15 20:48	06:50 19:59	07:12 (87) 19:03	07:26 17:11	07:05 16:46	08:09 (95) 8 08:17 (95)
5	05:46 21:13	06:16 20:47	06:52 19:57	07:13 (87) 19:02	07:27 17:10	07:07 16:46	08:10 (95) 7 08:17 (95)
6	05:47 21:12	06:17 20:46	06:53 19:55	07:16 (87) 19:00	07:28 17:09	07:08 16:46	08:11 (95) 6 08:17 (95)
7	05:48 21:12	06:18 20:44	06:54 19:54	07:18 (87) 18:56	07:10 17:07	07:47 16:46	08:12 (95) 4 08:16 (95)
8	05:49 21:12	06:19 20:43	06:55 19:52	07:19 (87) 18:54	07:11 17:06	07:48 16:46	08:13 (95) 2 08:15 (95)
9	05:49 21:11	06:20 20:42	06:56 19:50	07:20 (87) 18:53	07:12 17:05	07:49 16:46	08:14 (95) 1 08:15 (95)
10	05:50 21:11	06:21 20:40	06:57 19:48	07:21 (87) 18:51	07:14 17:04	07:50 16:46	
11	05:51 21:10	06:23 20:39	06:59 19:46	07:22 (87) 18:49	07:15 17:03	07:51 16:46	
12	05:52 21:10	06:24 20:37	07:00 19:44	07:23 (87) 18:47	07:16 17:02	07:51 16:46	07:59 (95) 9 08:08 (95)
13	05:52 21:09	06:25 20:36	07:01 19:43	07:24 (87) 18:46	07:18 17:01	07:52 16:46	07:57 (95) 13 08:10 (95)
14	05:53 21:09	06:26 20:34	07:02 19:41	07:25 (87) 18:44	07:19 17:00	07:53 16:46	07:58 (95) 16 08:12 (95)
15	05:54 21:08	06:27 20:33	07:03 19:39	07:26 (87) 18:42	07:20 16:59	07:54 16:46	07:59 (95) 18 08:13 (95)
16	05:55 21:07	06:28 20:31	07:04 19:37	07:27 (87) 18:40	07:22 16:58	07:55 16:46	07:55 (95) 20 08:15 (95)
17	05:56 21:07	06:30 20:30	07:06 19:35	07:28 (87) 18:39	07:23 16:57	07:54 16:47	07:55 (95) 21 08:15 (95)
18	05:57 21:06	06:31 20:28	07:07 19:33	07:29 (87) 18:37	07:24 16:56	07:54 16:47	07:56 (95) 22 08:16 (95)
19	05:58 21:05	06:32 20:27	07:08 19:31	07:30 (87) 18:35	07:26 16:55	07:54 16:47	07:57 (95) 22 08:16 (95)
20	05:59 21:04	06:33 20:25	07:09 19:29	07:31 (87) 18:34	07:27 16:54	07:54 16:48	07:57 (95) 22 08:16 (95)
21	06:00 21:03	06:34 20:23	07:10 19:28	07:32 (87) 18:32	07:28 16:53	07:54 16:48	07:58 (95) 23 08:17 (95)
22	06:01 21:03	06:35 20:22	07:11 19:26	07:33 (87) 18:30	07:29 16:52	07:54 16:49	07:58 (95) 23 08:17 (95)
23	06:02 21:02	06:37 20:20	07:13 19:24	07:34 (87) 18:29	07:31 16:52	07:55 16:49	07:59 (95) 22 08:17 (95)
24	06:03 21:01	06:38 20:18	07:14 19:22	07:35 (87) 18:27	07:32 16:51	07:55 16:50	07:59 (95) 21 08:18 (95)
25	06:04 21:00	06:39 20:17	07:15 19:20	07:36 (87) 18:26	07:33 16:50	07:56 16:50	08:00 (95) 20 08:18 (95)
26	06:05 20:59	06:40 20:15	07:16 19:18	07:37 (87) 18:24	07:34 16:50	07:59 16:51	08:00 (95) 19 08:18 (95)
27	06:06 20:58	06:41 20:13	07:17 19:16	07:38 (87) 18:23	07:36 16:49	08:01 16:52	08:00 (95) 18 08:19 (95)
28	06:07 20:57	06:42 20:12	07:18 19:14	07:39 (87) 18:21	07:37 16:49	08:02 16:52	08:01 (95) 16 08:18 (95)
29	06:08 20:56	06:43 20:10	07:19 19:13	07:40 (87) 18:20	07:38 16:48	08:03 16:53	08:01 (95) 15 08:18 (95)
30	06:09 20:54	06:45 20:08	07:20 19:11	07:41 (87) 18:18	07:39 16:48	08:04 16:54	08:01 (95) 14 08:18 (95)
31	06:10 20:53	06:46 20:06	07:21 19:09	07:42 (87) 18:17	07:40 16:47	08:05 16:55	08:01 (95) 16:55
Potential sun hours	470	435	377	341	289	276	
Total, worst case		41	33		354	61	
Sun reduction		0.74	0.69		0.50	0.49	
Oper. time red.		0.98	0.98		0.98	0.98	
Wind dir. red.		0.56	0.56		0.69	0.69	
Total reduction		0.41	0.38		0.34	0.33	
Total, real		17	13		120	20	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H153 - H153

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H154 - H154

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H155 - H155

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H156 - H156

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H157 - H157

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:31	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:19	19:22	18:27	16:51	16:50
25	07:51	07:10	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H161 - H161

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:23	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H163 - H163

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H165 - H165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:27	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	07:59	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:57	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H166 - H166

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:07	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:12	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:46	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:54	20:07		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H167 - H167

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	07:44	07:04	07:08		06:17	05:44	05:44	06:11	06:47	07:09 (78)	07:22	07:02	07:41	
	16:56	17:34	18:11	19:50		20:27	21:01	21:14	20:52	20:05	31 07:40 (78)	19:09	17:15	16:47	
2	08:02	07:43	07:02	07:06		07:26 (78)	06:15	05:44	05:45	06:12	06:48	07:10 (78)	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	2	07:28 (78)	20:29	21:02	21:13	20:51	20:03	29 07:39 (78)	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04		07:24 (78)	06:14	05:43	05:45	06:14	06:49	07:11 (78)	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	9	07:33 (78)	20:30	21:03	21:13	20:50	20:01	27 07:38 (78)	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02		07:22 (78)	06:13	05:43	05:46	06:15	06:51	07:12 (78)	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	13	07:35 (78)	20:31	21:04	21:13	20:49	19:59	25 07:37 (78)	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00		07:20 (78)	06:11	05:42	05:46	06:16	06:52	07:13 (78)	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	17	07:37 (78)	20:32	21:05	21:13	20:47	19:57	22 07:35 (78)	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58		07:19 (78)	06:10	05:42	05:47	06:17	06:53	07:14 (78)	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20	07:39 (78)	20:33	21:05	21:13	20:46	19:56	20 07:34 (78)	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57		07:17 (78)	06:08	05:41	05:48	06:18	06:54	07:15 (78)	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	22	07:39 (78)	20:35	21:06	21:12	20:45	19:54	17 07:32 (78)	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55		07:15 (78)	06:07	05:41	05:49	06:19	06:55	07:17 (78)	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	25	07:40 (78)	20:36	21:07	21:12	20:43	19:52	13 07:30 (78)	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53		07:13 (78)	06:06	05:41	05:49	06:20	06:56	07:18 (78)	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	27	07:40 (78)	20:37	21:07	21:11	20:42	19:50	9 07:27 (78)	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51		07:11 (78)	06:05	05:41	05:50	06:21	06:57	07:19 (78)	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	29	07:40 (78)	20:38	21:08	21:11	20:40	19:48	3 07:22 (78)	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50		07:10 (78)	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51	
	17:06	17:48	19:24	20:03	31	07:41 (78)	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46	
12	08:00	07:30	07:44	06:48		07:08 (78)	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52	
	17:07	17:49	19:25	20:04	33	07:41 (78)	20:41	21:09	21:10	20:37	19:45	18:47	17:02	16:46	
13	07:59	07:29	07:43	06:46		07:06 (78)	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52	
	17:08	17:51	19:27	20:05	34	07:40 (78)	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46	
14	07:59	07:28	07:41	06:44		07:04 (78)	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53	
	17:10	17:52	19:28	20:07	36	07:40 (78)	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46	
15	07:58	07:26	07:39	06:43		07:04 (78)	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54	
	17:11	17:53	19:29	20:08	36	07:40 (78)	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46	
16	07:58	07:25	07:37	06:41		07:04 (78)	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55	
	17:12	17:55	19:31	20:09	35	07:39 (78)	20:45	21:11	21:08	20:31	5 07:29 (78)	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39		07:03 (78)	05:56	05:40	05:56	06:30	07:19 (78)	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	35	07:38 (78)	20:46	21:12	21:07	20:30	14 07:33 (78)	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37		07:04 (78)	05:55	05:40	05:57	06:31	07:16 (78)	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	34	07:38 (78)	20:47	21:12	21:06	20:28	19 07:35 (78)	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36		07:04 (78)	05:54	05:40	05:58	06:32	07:14 (78)	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	33	07:37 (78)	20:48	21:12	21:05	20:27	22 07:36 (78)	19:31	18:35	16:55	16:47
20	07:55	07:19	07:30	06:34		07:05 (78)	05:53	05:40	05:59	06:33	07:12 (78)	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	32	07:37 (78)	20:49	21:13	21:04	20:25	26 07:38 (78)	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32		07:05 (78)	05:52	05:40	06:00	06:34	07:11 (78)	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	30	07:35 (78)	20:51	21:13	21:04	20:23	28 07:39 (78)	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31		07:06 (78)	05:52	05:41	06:01	06:35	07:10 (78)	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	28	07:34 (78)	20:52	21:13	21:03	20:22	30 07:40 (78)	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29		07:08 (78)	05:51	05:41	06:02	06:37	07:09 (78)	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	25	07:33 (78)	20:53	21:13	21:02	20:20	32 07:41 (78)	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28		07:08 (78)	05:50	05:41	06:03	06:38	07:08 (78)	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	22	07:30 (78)	20:54	21:14	21:01	20:18	33 07:41 (78)	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26		07:11 (78)	05:49	05:42	06:04	06:39	07:07 (78)	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	18	07:29 (78)	20:55	21:14	21:00	20:17	34 07:41 (78)	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24		07:13 (78)	05:48	05:42	06:05	06:40	07:06 (78)	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	12	07:25 (78)	20:56	21:14	20:59	20:15	35 07:41 (78)	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23		07:06 (78)	05:47	05:42	06:06	06:41	07:06 (78)	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:23		07:06 (78)	20:57	21:14	20:58	20:13	35 07:41 (78)	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21		07:06 (78)	20:57	21:14	20:57	20:12	36 07:41 (78)	19:15	18:21	16:49	16:52
	17:28	18:10	19:46	20:24		07:06 (78)	20:58	21:14	20:57	20:12	36 07:41 (78)	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20		07:06 (78)	20:57	21:14	20:57	20:12	36 07:41 (78)	19:15	18:21	16:49	16:52
	17:29		19:47	20:25		07:06 (78)	20:59	21:14	20:56	20:10	36 07:41 (78)	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18		07:06 (78)	20:59	21:14	20:56	20:10	36 07:41 (78)	19:13	18:20	16:48	16:53
	17:31		19:48	20:26		07:06 (78)	20:59	21:14	20:55	20:08	34 07:41 (78)	19:11	18:18	16:48	16:54
31	07:46		07:09			07:06 (78)	20:59	21:14	20:55	20:08	34 07:41 (78)	19:11	18:18	16:48	16:54
	17:32		19:49			07:06 (78)	20:59	21:14	20:55	20:08	34 07:41 (78)	19:11	18:18	16:48	16:54
Potential sun hours	288	292	369	403		458	464	470	435		377		341	289	276
Total, worst case					638					452	196				
Sun reduction					0.61					0.74	0.69				
Oper. time red.					0.98					0.98	0.98				
Wind dir. red.					0.56					0.56	0.56				
Total reduction					0.34					0.41	0.38				
Total, real					215					184	75				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H168 - H168

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:22	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46
10	08:00	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:46
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:09	17:51	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	16:46
15	07:58	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:36	20:14	20:49	21:13	21:04	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:02	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:41	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:49	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H169 - H169

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:01	16:46
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:59	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:23	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:27	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:14	18:21	16:49	16:52
29	07:47	07:13	07:23	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29	19:47	20:25	20:58	21:14	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46	07:11	06:18	05:45	05:44	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31	19:48	20:26	20:59	21:14	21:14	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45	07:09	07:19	06:19	05:45	05:45	06:10	06:46	07:22	08:00	08:01	08:01
	17:32	19:49	20:27	21:00	21:14	21:14	20:53	20:06	19:09	18:17	16:48	16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H170 - H170

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	08:06 (80)	07:04	08:02 (80)	07:07	06:17	05:44	05:44	06:11	06:47	07:22
	16:56	17:33	36 08:42 (80)	18:11	38 08:40 (80)	19:50	20:27	21:01	21:13	20:52	20:04	19:09
2	08:01	07:43	08:05 (80)	07:02	08:03 (80)	07:06	06:15	05:43	05:44	06:12	06:48	07:23
	16:57	17:35	38 08:43 (80)	18:12	35 08:38 (80)	19:52	20:28	21:02	21:13	20:51	20:03	19:07
3	08:01	07:42	08:04 (80)	07:00	08:06 (80)	07:04	06:14	05:43	05:45	06:13	06:49	07:24
	16:57	17:36	41 08:45 (80)	18:13	31 08:37 (80)	19:53	20:30	21:03	21:13	20:50	20:01	19:05
4	08:01	07:41	08:02 (80)	06:58	08:07 (80)	07:02	06:12	05:42	05:46	06:14	06:50	07:26
	16:58	17:38	43 08:45 (80)	18:15	27 08:34 (80)	19:54	20:31	21:04	21:13	20:48	19:59	19:03
5	08:01	07:40	08:01 (80)	06:57	08:10 (80)	07:00	06:11	05:42	05:46	06:16	06:51	07:27
	16:59	17:39	45 08:46 (80)	18:16	20 08:30 (80)	19:55	20:32	21:04	21:13	20:47	19:57	19:01
6	08:01	07:38	08:00 (80)	06:55	08:15 (80)	06:58	06:10	05:42	05:47	06:17	06:53	07:28
	17:00	17:40	47 08:47 (80)	18:17	9 08:24 (80)	19:56	20:33	21:05	21:12	20:46	19:55	19:00
7	08:01	07:37	07:59 (80)	06:53		06:56	06:08	05:41	05:48	06:18	06:54	07:29
	17:02	17:42	49 08:48 (80)	18:19		19:58	20:34	21:06	21:12	20:44	19:54	18:56
8	08:01	07:36	07:57 (80)	07:51		06:55	06:07	05:41	05:48	06:19	06:55	07:30
	17:03	17:43	51 08:48 (80)	18:20		19:59	20:36	21:07	21:12	20:43	19:52	18:54
9	08:01	07:34	07:57 (80)	07:50		06:53	06:06	05:41	05:49	06:20	06:56	07:32
	17:04	17:45	52 08:49 (80)	19:21		20:00	20:37	21:07	21:11	20:42	19:50	18:52
10	08:00	07:33	07:56 (80)	07:48		06:51	06:04	05:40	05:50	06:21	06:57	07:33
	17:05	17:46	53 08:49 (80)	19:23		20:01	20:38	21:08	21:11	20:40	19:48	18:51
11	08:00	07:32	07:56 (80)	07:46		06:49	06:03	05:40	05:51	06:22	06:58	07:34
	17:06	17:48	54 08:50 (80)	19:24		20:03	20:39	21:08	21:10	20:39	19:46	18:49
12	08:00	07:30	07:57 (80)	07:44		06:48	06:02	05:40	05:51	06:24	07:00	07:35
	17:07	17:49	54 08:51 (80)	19:25		20:04	20:40	21:09	21:10	20:37	19:44	18:47
13	07:59	07:29	07:56 (80)	07:42		06:46	06:01	05:40	05:52	06:25	07:01	07:37
	17:08	17:50	55 08:51 (80)	19:27		20:05	20:42	21:10	21:09	20:36	19:42	18:45
14	07:59	07:27	07:56 (80)	07:41		06:44	06:00	05:40	05:53	06:26	07:02	07:38
	17:10	17:52	55 08:51 (80)	19:28		20:06	20:43	21:10	21:09	20:34	19:41	18:44
15	07:58	07:26	07:55 (80)	07:39		06:42	05:58	05:40	05:54	06:27	07:03	07:39
	17:11	17:53	56 08:51 (80)	19:29		20:08	20:44	21:11	21:08	20:33	19:39	18:42
16	07:58	07:24	07:56 (80)	07:37		06:41	05:57	05:40	05:55	06:28	07:04	07:40
	17:12	17:54	55 08:51 (80)	19:30		20:09	20:45	21:11	21:07	20:31	19:37	18:40
17	07:57	07:23	07:56 (80)	07:35		06:39	05:56	05:40	05:56	06:29	07:05	07:42
	17:13	17:56	55 08:51 (80)	19:32		20:10	20:46	21:11	21:07	20:30	19:35	18:39
18	07:57	07:21	07:55 (80)	07:33		06:37	05:55	05:40	05:57	06:31	07:07	07:43
	17:15	17:57	55 08:50 (80)	19:33		20:11	20:47	21:12	21:06	20:28	19:33	18:37
19	07:56	07:20	07:56 (80)	07:31		06:36	05:54	05:40	05:58	06:32	07:08	07:44
	17:16	17:59	54 08:50 (80)	19:34		20:13	20:48	21:12	21:05	20:27	19:31	18:35
20	07:55	07:18	07:56 (80)	07:30		06:34	05:53	05:40	05:59	06:33	07:09	07:46
	17:17	18:00	53 08:49 (80)	19:35		20:14	20:49	21:12	21:04	20:25	19:29	18:34
21	07:55	07:17	07:57 (80)	07:28		06:32	05:52	05:40	06:00	06:34	07:10	07:47
	17:18	18:00	53 08:50 (80)	19:37		20:15	20:50	21:13	21:03	20:23	19:27	18:32
22	07:54	07:15	07:57 (80)	07:26		06:31	05:51	05:41	06:01	06:35	07:11	07:48
	17:20	18:01	52 08:49 (80)	19:38		20:16	20:51	21:13	21:03	20:22	19:26	18:30
23	07:53	07:14	07:57 (80)	07:24		06:29	05:50	05:41	06:02	06:36	07:12	07:49
	17:21	18:03	50 08:47 (80)	19:39		20:17	20:52	21:13	21:02	20:20	19:24	18:29
24	07:52	07:12	07:58 (80)	07:22		06:27	05:50	05:41	06:03	06:38	07:14	07:51
	17:22	18:04	49 08:47 (80)	19:40		20:19	20:54	21:13	21:01	20:18	19:22	18:27
25	07:51	08:17 (80)	07:10	07:58 (80)	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52
	17:24	8 08:25 (80)	18:05	48 08:46 (80)	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26
26	07:50	08:13 (80)	07:09	07:59 (80)	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53
	17:25	17 08:30 (80)	18:07	46 08:45 (80)	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24
27	07:49	08:12 (80)	07:07	08:00 (80)	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55
	17:27	21 08:33 (80)	18:08	44 08:44 (80)	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23
28	07:48	08:11 (80)	07:05	08:01 (80)	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56
	17:28	24 08:35 (80)	18:09	41 08:42 (80)	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21
29	07:47	08:09 (80)		07:13		06:20	05:46	05:43	06:08	06:43	07:20	07:57
	17:29	27 08:36 (80)		19:47		20:25	20:58	21:14	20:56	20:10	19:13	18:20
30	07:46	08:08 (80)		07:11		06:18	05:45	05:43	06:09	06:45	07:21	07:59
	17:31	30 08:38 (80)		19:48		20:26	20:59	21:14	20:54	20:08	19:11	18:18
31	07:45	08:07 (80)		07:09			05:45		06:10	06:46		08:00
	17:32	33 08:40 (80)		19:49			21:00		20:53	20:06		18:17
Potential sun hours	287		292	369		403	458	464	470	435	377	341
Total, worst case	160		1384	160							1109	613
Sun reduction	0.57		0.59	0.59							0.63	0.50
Oper. time red.	0.98		0.98	0.98							0.98	0.98
Wind dir. red.	0.67		0.67	0.67							0.67	0.67
Total reduction	0.37		0.39	0.39							0.41	0.33
Total, real	60		537	62							460	202

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H171 - H171

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:01	07:44	08:06 (83)	07:03	07:07	06:17	05:44	
	16:56	17:33	20 08:26 (83)	18:11	19:50	20:27	21:01	
2	08:01	07:43	08:05 (83)	07:02	07:06	06:15	05:43	
	16:57	17:35	22 08:27 (83)	18:12	19:51	20:28	21:02	
3	08:01	07:42	08:04 (83)	07:00	07:04	06:14	05:43	
	16:57	17:36	24 08:28 (83)	18:13	19:53	20:30	21:03	
4	08:01	07:41	08:03 (83)	06:58	07:02	06:12	05:42	
	16:58	17:38	25 08:28 (83)	18:15	19:54	20:31	21:03	
5	08:01	07:39	08:03 (83)	06:57	07:00	06:11	05:42	
	16:59	17:39	25 08:28 (83)	18:16	19:55	20:32	21:04	
6	08:01	07:38	08:03 (83)	06:55	06:58	06:10	05:42	
	17:00	17:40	26 08:29 (83)	18:17	19:56	20:33	21:05	
7	08:01	07:37	08:02 (83)	06:53	17:52 (80)	06:56	06:08	05:41
	17:01	17:42	27 08:29 (83)	18:19	3 17:55 (80)	19:58	20:34	21:06
8	08:01	07:36	08:03 (83)	07:51	18:47 (80)	06:55	06:07	05:41
	17:03	17:43	26 08:29 (83)	18:20	12 18:59 (80)	19:59	20:36	21:06
9	08:01	07:34	08:04 (83)	07:49	18:43 (80)	06:53	06:06	05:41
	17:04	17:45	25 08:29 (83)	19:21	17 19:00 (80)	20:00	20:37	21:07
10	08:00	07:33	08:03 (83)	07:48	18:41 (80)	06:51	06:04	05:40
	17:05	17:46	25 08:28 (83)	19:23	20 19:01 (80)	20:01	20:38	21:08
11	08:00	07:32	08:04 (83)	07:46	18:39 (80)	06:49	06:03	05:40
	17:06	17:47	24 08:28 (83)	19:24	23 19:02 (80)	20:03	20:39	21:08
12	08:00	07:30	08:05 (83)	07:44	18:38 (80)	06:48	06:02	05:40
	17:07	17:49	22 08:27 (83)	19:25	26 19:04 (80)	20:04	20:40	21:09
13	07:59	07:29	08:06 (83)	07:42	18:37 (80)	06:46	06:01	05:40
	17:08	17:50	20 08:26 (83)	19:26	29 19:06 (80)	20:05	20:41	21:10
14	07:59	07:27	08:07 (83)	07:40	18:36 (80)	06:44	06:00	05:40
	17:09	17:52	18 08:25 (83)	19:28	31 19:07 (80)	20:06	20:43	21:10
15	07:58	07:26	08:09 (83)	07:39	18:35 (80)	06:42	05:58	05:40
	17:11	17:53	14 08:23 (83)	19:29	33 19:08 (80)	20:08	20:44	21:10
16	07:58	07:24	08:11 (83)	07:37	18:34 (80)	06:41	05:57	05:40
	17:12	17:54	9 08:20 (83)	19:30	35 19:09 (80)	20:09	20:45	21:11
17	07:57	07:23		07:35	18:34 (80)	06:39	05:56	05:40
	17:13	17:56		19:32	34 19:08 (80)	20:10	20:46	21:11
18	07:57	07:21		07:33	18:33 (80)	06:37	05:55	05:40
	17:14	17:57		19:33	35 19:08 (80)	20:11	20:47	21:12
19	07:56	07:20		07:31	18:33 (80)	06:36	05:54	05:40
	17:16	17:59		19:34	35 19:08 (80)	20:12	20:48	21:12
20	07:55	07:18		07:29	18:33 (80)	06:34	05:53	05:40
	17:17	18:00		19:35	35 19:08 (80)	20:14	20:49	21:12
21	07:54	07:17		07:28	18:33 (80)	06:32	05:52	05:40
	17:18	18:00		19:37	34 19:07 (80)	20:15	20:50	21:13
22	07:54	07:15		07:26	18:34 (80)	06:31	05:51	05:40
	17:20	18:01		19:38	32 19:06 (80)	20:16	20:51	21:13
23	07:53	07:13		07:24	18:34 (80)	06:29	05:50	05:41
	17:21	18:03		19:39	31 19:05 (80)	20:17	20:52	21:13
24	07:52	07:12		07:22	18:34 (80)	06:27	05:50	05:41
	17:22	18:04		19:40	30 19:04 (80)	20:19	20:53	21:13
25	07:51	07:10		07:20	18:35 (80)	06:26	05:49	05:41
	17:24	18:05		19:42	27 19:02 (80)	20:20	20:54	21:13
26	07:50	07:09		07:18	18:36 (80)	06:24	05:48	05:42
	17:25	18:07		19:43	24 19:00 (80)	20:21	20:55	21:13
27	07:49	07:07		07:17	18:38 (80)	06:23	05:47	05:42
	17:26	18:08		19:44	21 18:59 (80)	20:22	20:56	21:14
28	07:48	08:11 (83)	07:05	07:15	18:40 (80)	06:21	05:46	05:42
	17:28	9 08:20 (83)	18:09	19:45	16 18:56 (80)	20:24	20:57	21:14
29	07:47	08:09 (83)		07:13	18:44 (80)	06:20	05:46	05:43
	17:29	12 08:21 (83)		19:47	7 18:51 (80)	20:25	20:58	21:14
30	07:46	08:08 (83)		07:11		06:18	05:45	05:43
	17:31	15 08:23 (83)		19:48		20:26	20:59	21:13
31	07:45	08:07 (83)		07:09			05:44	
	17:32	17 08:24 (83)		19:49			21:00	
Potential sun hours	288	292	369	403	458	464		
Total, worst case	53	352	590					
Sun reduction	0.57	0.59	0.59					
Oper. time red.	0.98	0.98	0.98					
Wind dir. red.	0.68	0.68	0.56					
Total reduction	0.38	0.39	0.32					
Total, real	20	138	191					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H171 - H171

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	07:22	18:17 (80)	07:01
	21:13	20:52	20:04	19:09	27	18:44 (80)
2	05:44	06:12	06:48	07:23	18:17 (80)	07:03
	21:13	20:51	20:03	19:07	25	18:42 (80)
3	05:45	06:13	06:49	07:24	18:18 (80)	07:04
	21:13	20:50	20:01	19:05	22	18:40 (80)
4	05:46	06:14	06:50	07:26	18:20 (80)	07:05
	21:13	20:48	19:59	19:03	19	18:39 (80)
5	05:46	06:16	06:51	07:27	18:22 (80)	07:07
	21:13	20:47	19:57	19:01	14	18:36 (80)
6	05:47	06:17	06:53	07:28	18:25 (80)	07:08
	21:12	20:46	19:55	19:00	9	18:34 (80)
7	05:48	06:18	06:54	07:29	07:09	07:34 (83)
	21:12	20:44	19:54	18:56	17:07	25
8	05:48	06:19	06:55	07:30	07:11	07:34 (83)
	21:12	20:43	19:52	18:54	17:06	24
9	05:49	06:20	06:56	07:32	07:12	07:36 (83)
	21:11	20:42	19:50	18:52	17:05	22
10	05:50	06:21	06:57	07:33	07:13	07:37 (83)
	21:11	20:40	19:48	18:51	17:04	20
11	05:51	06:22	06:58	07:34	07:15	07:38 (83)
	21:10	20:39	19:46	18:49	17:03	17
12	05:51	06:24	07:00	07:35	07:16	07:40 (83)
	21:10	20:37	19:44	18:47	17:01	15
13	05:52	06:25	07:01	07:37	07:18	07:41 (83)
	21:09	20:36	19:42	18:45	17:00	12
14	05:53	06:26	07:02	18:36 (80)	07:38	07:19
	21:09	20:34	19:41	4	18:40 (80)	18:44
15	05:54	06:27	07:03	18:30 (80)	07:39	07:20
	21:08	20:33	19:39	15	18:45 (80)	18:42
16	05:55	06:28	07:04	18:27 (80)	07:40	07:22
	21:07	20:31	19:37	20	18:47 (80)	18:40
17	05:56	06:29	07:05	18:25 (80)	07:42	07:23
	21:07	20:30	19:35	23	18:48 (80)	18:38
18	05:57	06:30	07:07	18:24 (80)	07:43	07:24
	21:06	20:28	19:33	26	18:50 (80)	18:37
19	05:58	06:32	07:08	18:22 (80)	07:44	07:25
	21:05	20:26	19:31	29	18:51 (80)	18:35
20	05:59	06:33	07:09	18:20 (80)	07:46	07:27
	21:04	20:25	19:29	31	18:51 (80)	18:33
21	05:59	06:34	07:10	18:19 (80)	07:47	07:28
	21:03	20:23	19:27	32	18:51 (80)	18:32
22	06:00	06:35	07:11	18:18 (80)	07:48	07:29
	21:03	20:22	19:26	33	18:51 (80)	18:30
23	06:01	06:36	07:12	18:17 (80)	07:49	07:31
	21:02	20:20	19:24	34	18:51 (80)	18:29
24	06:02	06:37	07:14	18:17 (80)	07:51	07:32
	21:01	20:18	19:22	35	18:52 (80)	18:27
25	06:04	06:39	07:15	18:17 (80)	07:52	07:33
	21:00	20:17	19:20	35	18:52 (80)	18:26
26	06:05	06:40	07:16	18:16 (80)	07:53	08:41 (83)
	20:59	20:15	19:18	35	18:51 (80)	18:24
27	06:06	06:41	07:17	18:16 (80)	07:55	08:38 (83)
	20:58	20:13	19:16	34	18:50 (80)	18:22
28	06:07	06:42	07:18	18:15 (80)	07:56	08:36 (83)
	20:57	20:11	19:14	34	18:49 (80)	18:21
29	06:08	06:43	07:19	18:15 (80)	07:57	08:35 (83)
	20:55	20:10	19:12	32	18:47 (80)	18:19
30	06:09	06:44	07:21	18:16 (80)	07:59	08:34 (83)
	20:54	20:08	19:11	30	18:46 (80)	18:18
31	06:10	06:46		08:00	08:34 (83)	
	20:53	20:06		18:17	24	08:58 (83)
Potential sun hours	470	435	377	341	289	276
Total, worst case			482	229	297	
Sun reduction			0.69	0.63	0.50	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.56	0.62	0.68	
Total reduction			0.38	0.38	0.33	
Total, real			183	87	99	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H172 - H172

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	07:44	16:47 (82)	07:03	16:34 (82)	07:07
	16:56	17:33	19	17:08 (81)	18:11	37
2	08:01	07:43	16:43 (82)	07:02	16:35 (82)	07:06
	16:57	17:35	26	17:09 (81)	18:12	34
3	08:01	07:42	16:41 (82)	07:00	16:37 (82)	07:04
	16:57	17:36	30	17:11 (81)	18:13	31
4	08:01	07:41	16:39 (82)	06:58	16:39 (82)	07:02
	16:58	17:38	33	17:12 (81)	18:15	26
5	08:01	07:39	08:01 (85)	06:57	16:41 (82)	07:00
	16:59	17:39	40	17:14 (81)	18:16	22
6	08:01	07:38	08:00 (85)	06:55	16:44 (82)	06:58
	17:00	17:40	45	17:16 (81)	18:17	14
7	08:01	07:37	07:58 (85)	06:53	16:58 (82)	07:00
	17:01	17:42	49	17:16 (81)	18:19	19
8	08:01	07:36	07:57 (85)	07:51	16:58 (82)	07:00
	17:03	08:25 (84)	07:51	06:55	16:58 (82)	07:00
9	08:01	07:34	17:18 (81)	18:20	19:59	20:36
	17:04	08:24 (84)	07:56 (85)	07:49	19:59	20:36
10	08:00	07:33	17:20 (81)	19:21	20:00	20:37
	17:05	08:24 (84)	07:54 (85)	07:48	20:00	20:37
11	08:00	07:32	17:20 (81)	19:23	20:01	20:38
	17:06	08:29 (84)	07:53 (85)	07:46	20:01	20:38
12	08:00	07:30	17:20 (81)	19:24	20:03	20:39
	17:07	08:23 (84)	07:51 (85)	07:44	20:03	20:39
13	07:59	07:29	17:20 (81)	19:25	20:04	20:40
	17:08	08:31 (84)	07:52 (85)	07:42	20:04	20:40
14	07:59	07:27	17:20 (81)	19:26	20:05	20:41
	17:09	08:23 (84)	07:54 (85)	07:40	20:05	20:41
15	07:58	07:26	17:19 (81)	19:28	20:06	20:42
	17:11	08:21 (84)	16:29 (82)	07:39	20:06	20:42
16	07:58	07:24	17:19 (81)	19:29	20:08	20:44
	17:12	08:34 (84)	17:53	19:29	20:08	20:44
17	07:57	07:23	16:29 (82)	07:37	20:09	20:45
	17:13	08:21 (84)	16:29 (82)	07:37	20:09	20:45
18	07:57	07:21	17:18 (81)	19:32	20:10	20:46
	17:14	08:35 (84)	17:56	19:32	20:10	20:46
19	07:56	07:20	16:29 (82)	07:31	20:11	20:47
	17:16	08:19 (84)	16:29 (82)	07:31	20:11	20:47
20	07:55	07:18	16:29 (82)	07:29	20:12	20:48
	17:17	08:36 (84)	17:59	19:34	20:12	20:48
21	07:54	07:17	16:29 (82)	07:28	20:13	20:49
	17:18	08:18 (84)	16:29 (82)	07:29	20:13	20:49
22	07:54	07:15	16:29 (82)	07:26	20:14	20:49
	17:20	08:37 (84)	18:01	19:38	20:14	20:49
23	07:53	07:13	16:29 (82)	07:24	20:15	20:50
	17:21	08:17 (84)	16:29 (82)	07:24	20:15	20:50
24	07:52	07:12	16:30 (82)	07:22	20:16	20:51
	17:22	08:36 (84)	18:03	19:39	20:16	20:51
25	07:51	07:10	16:30 (82)	07:20	20:17	20:52
	17:24	08:18 (84)	16:30 (82)	07:20	20:17	20:52
26	07:50	07:09	16:30 (82)	07:18	20:18	20:53
	17:25	08:37 (84)	18:05	19:42	20:18	20:53
27	07:49	07:07	16:31 (82)	07:17	20:19	20:54
	17:26	08:19 (84)	16:32 (82)	07:17	20:19	20:54
28	07:48	07:05	16:32 (82)	07:15	20:20	20:55
	17:28	08:36 (84)	18:04	19:40	20:20	20:55
29	07:47	07:04	16:33 (82)	07:14	20:21	20:56
	17:29	08:19 (84)	16:33 (82)	07:15	20:21	20:56
30	07:46	07:03	16:33 (82)	07:13	20:22	20:57
	17:31	08:24 (84)	17:12 (82)	19:45	20:22	20:57
31	07:45	07:02	16:34 (82)	07:12	20:23	20:58
	17:32	08:32 (84)	18:09	19:49	20:23	20:58
Potential sun hours	288	292	369	403	458	464
Total, worst case	288	1309	164	381		
Sun reduction	0.57	0.59	0.59	0.61		
Oper. time red.	0.98	0.98	0.98	0.98		
Wind dir. red.	0.69	0.57	0.56	0.55		
Total reduction	0.39	0.33	0.32	0.33		
Total, real	111	430	53	125		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H172 - H172

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44 21:13	06:11 20:52	06:47 20:04	07:09 (83) 07:14 (83)	07:22 19:09	07:01 17:15	07:24 (85) 16:49 (81)	07:40 16:47	08:05 (84) 08:12 (84)
2	05:44 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:23 17:14	59 16:49 (81)	07:03 16:47	07:41 16:47	08:07 (84) 08:13 (84)
3	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:24 17:12	57 16:48 (81)	07:04 16:46	07:43 16:46	08:08 (84) 08:12 (84)
4	05:46 21:13	06:14 20:48	06:50 19:59	07:26 19:03	07:26 17:11	53 16:48 (81)	07:05 16:46	07:44 16:46	08:09 (84) 08:11 (84)
5	05:46 21:13	06:16 20:47	06:51 19:57	07:27 19:01	07:27 17:10	44 16:45 (81)	07:07 16:45	07:45 16:46	
6	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:28 17:09	39 16:43 (81)	07:08 16:46	07:46 16:46	
7	05:48 21:12	06:18 20:44	06:54 19:54	07:29 18:56	07:29 17:23 (82)	33 16:43 (81)	07:09 16:46	07:47 16:46	
8	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:30 17:17 (82)	30 16:11 (82)	07:11 16:45	07:48 16:45	
9	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:32 17:15 (82)	25 16:40 (81)	07:12 16:45	07:49 16:45	
10	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:33 17:12 (82)	24 16:19 (82)	07:13 16:45	07:50 16:45	
11	05:51 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:34 17:10 (82)	16 16:38 (81)	07:15 16:45	07:50 16:45	
12	05:51 21:10	06:24 20:37	07:00 19:44	07:35 18:47	07:35 17:08 (82)	32 17:42 (82)	07:16 17:03	07:51 16:45	
13	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45	07:37 17:07 (82)	36 17:44 (82)	07:18 17:00	07:52 16:45	
14	05:53 21:09	06:26 20:34	07:02 (83) 19:41	07:38 18:44	07:38 17:05 (82)	37 17:45 (82)	07:19 16:59	07:53 16:46	
15	05:54 21:08	06:27 20:33	07:03 (83) 19:39	07:39 18:42	07:39 17:04 (82)	40 17:46 (82)	07:20 16:58	07:54 16:46	
16	05:55 21:07	06:28 20:31	07:04 (83) 19:37	07:40 18:40	07:40 17:03 (82)	42 17:47 (82)	07:22 16:57	07:55 16:46	
17	05:56 21:07	06:29 20:30	07:05 (83) 19:35	07:42 18:38	07:42 17:02 (82)	43 17:48 (82)	07:23 16:56	07:55 16:46	
18	05:57 21:06	06:30 20:28	07:06 (83) 19:33	07:43 18:37	07:43 17:02 (82)	45 17:49 (82)	07:24 16:55	07:56 16:47	
19	05:58 21:05	06:32 20:26	07:07 (83) 19:31	07:44 18:35	07:44 17:01 (82)	46 17:47 (82)	07:25 16:55	07:57 16:47	
20	05:59 21:04	06:33 20:25	07:08 (83) 19:29	07:46 18:34	07:46 17:00 (82)	46 17:47 (82)	07:27 16:54	07:57 16:47	
21	06:00 21:03	06:34 20:23	07:09 (83) 19:27	07:47 18:32	07:47 17:00 (82)	47 17:47 (82)	07:28 16:53	07:58 16:48	
22	06:00 21:03	06:35 20:22	07:10 (83) 19:26	07:48 18:30	07:48 16:59 (82)	48 17:47 (82)	07:29 16:52	07:58 16:48	
23	06:01 21:02	06:36 20:20	07:11 (83) 19:24	07:49 18:29	07:49 16:59 (82)	48 17:47 (82)	07:31 16:51	07:59 16:49	
24	06:03 21:01	06:37 20:18	07:12 (83) 19:22	07:51 18:27	07:51 16:59 (82)	48 17:47 (82)	07:32 16:51	07:59 16:49	
25	06:04 21:00	06:39 20:17	07:13 (83) 19:20	07:52 18:26	07:52 16:59 (82)	49 17:48 (81)	07:33 16:50	08:00 16:50	
26	06:05 20:59	06:40 20:15	07:14 (83) 19:18	07:53 18:24	07:53 16:59 (82)	50 17:49 (81)	07:34 16:50	08:00 16:51	
27	06:06 20:58	06:41 20:13	07:15 (83) 19:16	07:55 18:22	07:55 16:59 (82)	50 17:49 (81)	07:36 16:49	08:00 16:51	
28	06:07 20:57	06:42 20:11	07:16 (83) 19:14	07:56 18:21	07:56 16:59 (82)	52 17:49 (81)	07:37 16:48	08:01 16:52	
29	06:08 20:55	06:43 20:10	07:17 (83) 19:12	07:57 18:20	07:57 16:59 (82)	59 17:49 (81)	07:38 16:48	08:01 16:53	
30	06:09 20:54	06:44 20:08	07:18 (83) 19:11	07:59 18:18	07:59 16:59 (82)	62 17:50 (81)	07:39 16:48	08:01 16:54	
31	06:10 20:53	06:46 20:06	07:19 (83) 19:10	08:00 18:17	08:00 17:50 (81)	62 17:50 (81)	08:23 (85) 16:47	08:01 16:55	
Potential sun hours	470	435	377	341	289	276			
Total, worst case		384	5	1083	674	19			
Sun reduction		0.74	0.69	0.63	0.50	0.49			
Oper. time red.		0.98	0.98	0.98	0.98	0.98			
Wind dir. red.		0.55	0.55	0.56	0.62	0.69			
Total reduction		0.40	0.37	0.35	0.30	0.33			
Total, real		152	2	378	205	6			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H173 - H173

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:01	07:44	08:06 (84)	07:03	07:24 (86)	07:07	19:15 (81)	06:17	05:44	
	16:56	17:33	19 08:25 (84)	18:11	15 07:39 (85)	19:50	13 19:28 (81)	20:27	21:01	
2	08:01	07:43	08:05 (84)	07:02	07:22 (86)	07:05	19:16 (81)	06:15	05:43	
	16:57	17:35	22 08:27 (84)	18:12	17 07:39 (85)	19:51	14 19:30 (81)	20:28	21:02	
3	08:01	07:42	08:04 (84)	07:00	07:21 (86)	07:04	19:16 (81)	06:14	05:43	
	16:57	17:36	25 08:29 (84)	18:13	19 07:40 (85)	19:53	15 19:31 (81)	20:30	21:03	
4	08:01	07:41	08:02 (84)	06:58	07:19 (86)	07:02	19:17 (81)	06:12	05:42	
	16:58	17:38	28 08:30 (84)	18:15	21 07:40 (85)	19:54	13 19:30 (81)	20:31	21:03	
5	08:01	07:39	08:01 (84)	06:57	07:17 (86)	07:00	19:18 (81)	06:11	05:42	
	16:59	17:39	30 08:31 (84)	18:16	23 07:40 (85)	19:55	10 19:28 (81)	20:32	21:04	
6	08:01	07:38	08:00 (84)	06:55	07:15 (86)	06:58		06:10	05:42	
	17:00	17:40	33 08:33 (84)	18:17	25 07:40 (85)	19:56		20:33	21:05	
7	08:01	07:37	07:59 (84)	06:53	07:13 (85)	06:56		06:08	05:41	
	17:01	17:42	34 08:33 (84)	18:19	26 07:39 (85)	19:58		20:34	21:06	
8	08:01	07:36	07:58 (84)	07:51	08:14 (85)	06:55		06:07	05:41	
	17:03	17:43	36 08:34 (84)	18:20	25 08:39 (85)	19:59		20:36	21:06	
9	08:01	07:34	07:58 (84)	07:49	08:14 (85)	06:53		06:06	05:41	
	17:04	17:45	37 08:35 (84)	19:21	24 08:38 (85)	20:00		20:37	21:07	
10	08:00	07:33	07:57 (84)	07:48	08:15 (85)	06:51		06:04	05:40	
	17:05	17:46	38 08:35 (84)	19:23	22 08:37 (85)	20:01		20:38	21:08	
11	08:00	07:32	07:57 (84)	07:46	08:15 (85)	06:49		06:03	05:40	
	17:06	17:47	39 08:36 (84)	19:24	21 08:36 (85)	20:03		20:39	21:08	
12	08:00	07:30	07:56 (84)	07:44	08:16 (85)	06:48		06:02	05:40	
	17:07	17:49	40 08:36 (84)	19:25	18 08:34 (85)	20:04		20:40	21:09	
13	07:59	07:29	07:57 (84)	07:42	08:19 (85)	06:46		19:41 (82)	06:01	05:40
	17:08	17:50	40 08:37 (84)	19:26	13 08:32 (85)	20:05	2	19:43 (82)	20:41	21:09
14	07:59	07:27	07:56 (84)	07:40	08:23 (85)	06:44		19:38 (82)	06:00	05:40
	17:09	17:52	40 08:36 (84)	19:28	4 08:27 (85)	20:06	6	19:44 (82)	20:43	21:10
15	07:58	07:26	07:56 (84)	07:39		06:42		19:36 (82)	05:58	05:40
	17:11	17:53	41 08:37 (84)	19:29		20:08	10	19:46 (82)	20:44	21:10
16	07:58	07:24	07:56 (84)	07:37		06:41		19:35 (82)	05:57	05:40
	17:12	17:54	40 08:36 (84)	19:30		20:09	12	19:47 (82)	20:45	21:11
17	07:57	07:23	07:57 (84)	07:35		06:39		19:33 (82)	05:56	05:40
	17:13	17:56	39 08:36 (84)	19:32		20:10	14	19:47 (82)	20:46	21:11
18	07:56	07:21	07:57 (84)	07:33		06:37		19:33 (82)	05:55	05:40
	17:14	17:57	39 08:36 (84)	19:33		20:11	16	19:49 (82)	20:47	21:12
19	07:56	07:20	07:57 (84)	07:31		06:36		19:32 (82)	05:54	05:40
	17:16	17:59	39 08:36 (84)	19:34		20:12	18	19:50 (82)	20:48	21:12
20	07:55	07:18	07:58 (84)	07:29		06:34		19:31 (82)	05:53	05:40
	17:17	18:00	37 08:35 (84)	19:35		20:14	20	19:51 (82)	20:49	21:12
21	07:54	07:17	07:59 (84)	07:28		06:32		19:31 (82)	05:52	05:40
	17:18	18:00	35 08:34 (84)	19:37		20:15	22	19:53 (82)	20:50	21:13
22	07:54	07:15	07:59 (84)	07:26		06:31		19:31 (82)	05:51	05:40
	17:20	18:01	34 08:33 (84)	19:38		20:16	22	19:53 (82)	20:51	21:13
23	07:53	07:13	08:00 (84)	07:24		06:29		19:31 (82)	05:50	05:41
	17:21	18:03	31 08:31 (84)	19:39		20:17	23	19:54 (82)	20:52	21:13
24	07:52	07:12	08:01 (84)	07:22		06:27		19:31 (82)	05:50	05:41
	17:22	18:04	30 08:31 (84)	19:40		20:19	24	19:55 (82)	20:53	21:13
25	07:51	07:10	08:03 (84)	07:20		06:26		19:31 (82)	05:49	05:41
	17:24	18:05	26 08:29 (84)	19:42		20:20	23	19:54 (82)	20:54	21:13
26	07:50	07:09	07:29 (85)	07:18		19:20 (81)	06:24	19:32 (82)	05:48	05:42
	17:25	18:07	26 08:26 (84)	19:43	1	19:21 (81)	20:21	19:54 (82)	20:55	21:13
27	07:49	07:07	07:27 (86)	07:17		19:19 (81)	06:23	19:33 (82)	05:47	05:42
	17:26	18:08	25 08:23 (84)	19:44	4	19:23 (81)	20:22	19:52 (82)	20:56	21:13
28	07:48	07:05	07:26 (86)	07:15		19:17 (81)	06:21	19:34 (82)	05:46	05:42
	17:28	18:09	20 08:19 (84)	19:45	7	19:24 (81)	20:23	19:51 (82)	20:57	21:14
29	07:47			07:13		19:16 (81)	06:20	19:35 (82)	05:46	05:43
	17:29			19:47	9	19:25 (81)	20:25	19:49 (82)	20:58	21:13
30	07:46	08:13 (84)		07:11		19:15 (81)	06:18	19:38 (82)	05:45	05:43
	17:31	3 08:16 (84)		19:48	11	19:26 (81)	20:26	19:47 (82)	20:59	21:13
31	07:45	08:08 (84)		07:09		19:15 (81)			05:45	
	17:32	14 08:22 (84)		19:49	12	19:27 (81)			21:00	
Potential sun hours	288	292	369	403	458	464				
Total, worst case	17	923	317	358						
Sun reduction	0.57	0.59	0.59	0.61						
Oper. time red.	0.98	0.98	0.98	0.98						
Wind dir. red.	0.67	0.67	0.62	0.62						
Total reduction	0.37	0.39	0.36	0.37						
Total, real	6	356	114	132						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H173 - H173

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:57 (85) 17:15	07:01 08:05 (84)
2	05:44 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:55 (85) 17:14	07:03 08:04 (84)
3	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:53 (85) 17:12	07:04 08:04 (84)
4	05:46 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:51 (85) 17:11	07:05 08:03 (84)
5	05:46 21:13	06:16 20:47	06:51 19:57	07:27 19:01	07:51 (85) 17:10	07:07 08:03 (84)
6	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:50 (85) 17:09	07:08 08:01 (84)
7	05:48 21:12	06:18 20:44	06:54 19:54	19:13 (81) 07:29	07:50 (85) 17:09	07:33 (84) 07:47
8	05:48 21:12	06:19 20:43	06:55 19:52	19:11 (81) 07:30	07:51 (86) 17:11	07:34 (84) 07:48
9	05:49 21:11	06:20 20:42	06:56 19:50	19:22 (81) 18:56	07:32 18:54	07:12 17:06
10	05:50 21:11	06:21 20:40	06:57 19:48	19:09 (81) 18:52	07:33 18:52	07:13 17:05
11	05:51 21:10	06:22 20:39	06:58 19:46	19:24 (81) 18:51	07:34 18:51	07:15 17:04
12	05:51 21:10	06:24 20:37	07:00 19:44	19:08 (81) 07:34	07:35 18:49	07:15 17:03
13	05:52 21:09	06:25 20:36	19:45 (82) 07:01	19:07 (81) 07:37	07:58 (86) 17:17	07:16 07:52
14	05:53 21:09	06:26 20:34	19:55 (82) 19:43 (82)	19:42 07:02	19:18 (81) 18:45	08:11 (85) 17:00
15	05:54 21:08	06:27 20:33	19:58 (82) 19:41 (82)	07:03 07:03	19:16 (81) 18:44	08:54 (84) 16:59
16	05:55 21:07	06:28 20:31	19:59 (82) 19:40 (82)	07:04 07:04	19:06 (81) 07:39	08:00 (85) 07:20
17	05:56 21:07	06:29 20:30	20:00 (82) 19:39 (82)	07:05 07:05	19:14 (81) 18:42	08:57 (84) 16:58
18	05:57 21:06	06:30 20:28	20:00 (82) 19:37 (82)	07:06 07:08	19:07 (81) 07:40	08:02 (85) 07:21
19	05:58 21:05	06:32 20:26	19:37 (82) 19:36 (82)	07:09 07:09	18:40 25	08:59 (84) 16:57
20	05:59 21:04	06:33 20:25	20:00 (82) 19:29	07:10 07:10	19:08 (81) 07:42	08:33 (84) 07:23
21	05:59 21:03	06:34 20:23	19:36 (82) 19:27	07:11 07:11	18:38 28	09:01 (84) 16:56
22	06:00 21:02	06:35 20:22	19:38 (82) 19:38 (82)	07:06 07:06	07:43 18:37	08:31 (84) 07:24
23	06:01 21:02	06:36 20:20	20:01 (82) 19:37 (82)	07:33 07:08	31	09:02 (84) 16:55
24	06:03 21:01	06:37 20:18	19:37 (82) 19:36 (82)	07:14 07:14	07:44 18:35	08:31 (84) 07:25
25	06:04 21:00	06:39 20:17	20:01 (82) 19:35 (82)	07:15 07:15	32	09:03 (84) 16:55
26	06:05 20:59	06:40 20:15	19:36 (82) 19:36 (82)	07:16 07:16	07:45 18:33	08:29 (84) 07:27
27	06:06 20:58	06:41 20:13	20:00 (82) 19:29	07:17 07:17	35	09:04 (84) 16:54
28	06:07 20:57	06:42 20:11	19:36 (82) 19:28	07:18 07:18	07:47 18:32	08:29 (84) 07:28
29	06:08 20:55	06:43 20:10	19:58 (82) 19:27	07:19 07:19	36	09:05 (84) 16:53
30	06:09 20:54	06:44 20:08	19:35 (82) 19:11	07:20 07:20	07:48 18:30	08:28 (84) 07:29
31	06:10 20:53	06:46 20:06	19:56 (82) 19:26	07:21 07:21	37	09:05 (84) 16:52
Potential sun hours	470	435	377	341	289	276
Total, worst case		294	126	898	317	
Sun reduction		0.74	0.69	0.63	0.50	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.62	0.60	0.65	0.67	
Total reduction		0.45	0.41	0.40	0.33	
Total, real		133	51	363	104	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H174 - H174

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:01	07:44	07:03	07:07	06:17	19:19 (86)	05:44	05:44	06:11	06:47	19:17 (86)	07:22	07:01	07:40	
	16:56	17:33	18:11	19:50	20:27	19:31 (86)	21:01	21:13	20:52	20:04	19:39 (86)	19:09	17:15	16:47	
2	08:01	07:43	07:02	07:05	06:15		05:43	05:44	06:12	06:48	19:19 (86)	07:23	07:03	07:41	
	16:56	17:35	18:12	19:51	20:28		21:02	21:13	20:51	20:02	19:38 (86)	19:07	17:14	16:47	
3	08:01	07:42	07:00	07:04	06:14		05:43	05:45	06:13	06:49	19:21 (86)	07:24	07:04	07:42	
	16:57	17:36	18:13	19:53	20:29		21:03	21:13	20:49	20:01	14 19:35 (86)	19:05	17:12	16:46	
4	08:01	07:41	06:58	07:02	06:12		05:42	05:46	06:14	06:50	19:22 (86)	07:25	07:05	07:43	
	16:58	17:38	18:15	19:54	20:31		21:03	21:13	20:48	19:59	12 19:34 (86)	19:03	17:11	16:46	
5	08:01	07:39	06:56	07:00	06:11		05:42	05:46	06:15	06:51	19:21 (86)	07:27	07:07	07:45	
	16:59	17:39	18:16	19:55	20:32		21:04	21:12	20:47	19:57	11 19:32 (86)	19:01	17:10	16:46	
6	08:01	07:38	06:55	06:58	06:09		05:42	05:47	06:17	06:52	19:20 (86)	07:28	07:08	07:46	
	17:00	17:40	18:17	19:56	20:33		21:05	21:12	20:46	19:55	11 19:31 (86)	18:58	17:08	16:46	
7	08:01	07:37	06:53	06:56	06:08		05:41	05:47	06:18	06:54	19:20 (86)	07:29	07:09	07:47	
	17:01	17:42	18:19	19:58	20:34		21:06	21:12	20:44	19:53	9 19:29 (86)	18:56	17:07	16:45	
8	08:01	07:36	07:51	06:55	06:07		05:41	05:48	06:19	06:55	19:19 (86)	07:30	07:11	07:48	
	17:02	17:43	18:20	19:59	20:35		21:06	21:11	20:43	19:52	8 19:27 (86)	18:54	17:06	16:45	
9	08:00	07:34	07:49	06:53	06:06		05:41	05:49	06:20	06:56	19:19 (86)	07:32	07:12	07:49	
	17:04	17:45	19:21	20:00	20:37		21:07	21:11	20:41	19:50	6 19:25 (86)	18:52	17:05	16:45	
10	08:00	07:33	07:48	06:51	06:04		05:40	05:50	06:21	06:57	19:20 (86)	07:33	07:13	07:49	
	17:05	17:46	19:22	20:01	20:38		21:08	21:11	20:40	19:48	3 19:23 (86)	18:50	17:04	16:45	
11	08:00	07:31	07:46	06:49	06:03		05:40	05:50	06:22		19:31 (86)	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39		21:08	21:10	20:39	6 19:37 (86)	19:46	1 19:22 (86)	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02		05:40	05:51	06:23		19:27 (86)	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40		21:09	21:10	20:37	13 19:40 (86)	19:44	18:47	17:01	16:45	
13	07:59	07:29	07:42	06:46	06:01		05:40	05:52	06:25		19:24 (86)	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41		21:09	21:09	20:36	18 19:42 (86)	19:42	18:45	17:00	16:45	
14	07:59	07:27	07:40	06:44	06:00		05:40	05:53	06:26		19:22 (86)	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:42		21:10	21:08	20:34	22 19:44 (86)	19:40	18:43	16:59	16:46	
15	07:58	07:26	07:39	06:42	06:00		05:40	05:54	06:27		19:22 (86)	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44		21:10	21:08	20:33	24 19:46 (86)	19:39	18:42	16:58	16:46	
16	07:58	07:24	07:37	06:41	06:00		05:40	05:55	06:28		19:20 (86)	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45		21:11	21:07	20:31	26 19:46 (86)	19:37	18:40	16:57	16:46	
17	07:57	07:23	07:35	06:39	06:00		05:40	05:56	06:29		19:19 (86)	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46		21:11	21:06	20:29	28 19:47 (86)	19:35	18:38	16:56	16:46	
18	07:56	07:21	07:33	06:37	06:00		05:40	05:57	06:30		19:18 (86)	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47		21:12	21:06	20:28	29 19:47 (86)	19:33	18:37	16:55	16:47	
19	07:56	07:20	07:31	06:35	06:00		05:40	05:57	06:32		19:17 (86)	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48		21:12	21:05	20:26	31 19:48 (86)	19:31	18:35	16:54	16:47	
20	07:55	07:18	07:29	06:34	06:00		05:40	05:58	06:33		19:16 (86)	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49		21:12	21:04	20:25	33 19:49 (86)	19:29	18:33	16:54	16:47	
21	07:54	07:17	07:27	06:32	06:00		05:40	05:59	06:34		19:15 (86)	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50		21:13	21:03	20:23	36 19:51 (86)	19:27	18:32	16:53	16:48	
22	07:54	07:15	07:26	06:30	06:00		05:40	06:00	06:35		19:15 (86)	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51		21:13	21:02	20:21	37 19:52 (86)	19:25	18:30	16:52	16:48	
23	07:53	07:13	07:24	06:29	06:00		05:41	06:01	06:36		19:14 (86)	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52		21:13	21:01	20:20	39 19:53 (86)	19:24	18:29	16:51	16:49	
24	07:52	07:12	07:22	06:27	06:00		05:41	06:02	06:37		19:15 (86)	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53		21:13	21:01	20:18	39 19:54 (86)	19:22	18:27	16:51	16:49	
25	07:51	07:10	07:20	06:26	06:00		05:41	06:03	06:39		19:14 (86)	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54		21:13	21:00	20:16	38 19:52 (86)	19:20	18:25	16:50	16:50	
26	07:50	07:08	07:18	06:24	06:00		05:42	06:04	06:40		19:14 (86)	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55		21:13	20:59	20:15	36 19:50 (86)	19:18	18:24	16:49	16:51	
27	07:49	07:07	07:16	06:23	06:00		05:42	06:06	06:41		19:14 (86)	07:17	07:55	07:35	08:00
	17:26	18:08	19:44	20:22	20:56		21:13	20:57	20:13	34 19:48 (86)	19:16	18:22	16:49	16:51	
28	07:48	07:05	07:15	06:21	06:00		05:42	06:07	06:42		19:14 (86)	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57		21:13	20:56	20:11	32 19:46 (86)	19:14	18:21	16:48	16:52	
29	07:47		07:13	06:20	06:00		05:43	06:08	06:43		19:15 (86)	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58		21:13	20:55	20:10	30 19:45 (86)	19:12	18:19	16:48	16:53	
30	07:46		07:11	06:18	06:00		05:43	06:09	06:44		19:15 (86)	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59		21:13	20:54	20:08	28 19:43 (86)	19:11	18:18	16:47	16:54	
31	07:45		07:09		05:44		06:10	06:46			19:16 (86)		08:00		08:01
	17:32		19:49		21:00		20:53	20:06	25 19:41 (86)			18:17		16:54	
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276			
Total, worst case				693	12			604	116						
Sun reduction				0.61	0.65			0.74	0.69						
Oper. time red.				0.98	0.98			0.98	0.98						
Wind dir. red.				0.62	0.62			0.62	0.61						
Total reduction				0.37	0.39			0.45	0.41						
Total, real				255	5			270	48						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H175 - H175

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:01	15:55 (85)	07:44	07:03	07:07	19:19 (83)	06:17	05:44
	16:56	13 16:08 (85)	17:33	18:11	19:50	9 19:28 (83)	20:27	21:01
2	08:01	15:56 (85)	07:43	07:02	07:05	19:18 (83)	06:15	05:43
	16:56	13 16:29 (84)	17:35	18:12	19:51	11 19:29 (83)	20:28	21:02
3	08:01	15:57 (85)	07:42	07:00	07:04	19:19 (83)	06:14	05:43
	16:57	13 16:30 (84)	17:36	18:13	19:53	12 19:31 (83)	20:29	21:03
4	08:01	15:57 (85)	07:41	06:58	07:02	19:18 (83)	06:12	05:42
	16:58	12 16:30 (84)	17:38	18:15	19:54	14 19:32 (83)	20:31	21:03
5	08:01	16:00 (85)	07:39	06:56	07:00	19:18 (83)	06:11	05:42
	16:59	9 16:31 (84)	17:39	18:16	19:55	15 19:33 (83)	20:32	21:04
6	08:01	16:27 (84)	07:38	06:55	06:58	19:18 (83)	06:09	05:42
	17:00	5 16:32 (84)	17:40	18:17	19:56	16 19:34 (83)	20:33	21:05
7	08:01	16:27 (84)	07:37	06:53	06:56	19:18 (83)	06:08	05:41
	17:01	7 16:34 (84)	17:42	18:19	19:58	16 19:34 (83)	20:34	21:06
8	08:01	16:27 (84)	07:36	07:51	06:55	19:20 (83)	06:07	05:41
	17:02	7 16:34 (84)	17:43	18:20	19:59	13 19:33 (83)	20:35	21:06
9	08:00	16:27 (84)	07:34	07:49	06:53	19:22 (83)	06:06	05:41
	17:04	8 16:35 (84)	17:45	19:21	20:00	8 19:30 (83)	20:37	21:07
10	08:00	16:28 (84)	07:33	07:48	06:51		06:04	05:40
	17:05	9 16:37 (84)	17:46	19:22	20:01		20:38	21:08
11	08:00	16:27 (84)	07:32	07:46	06:49		06:03	05:40
	17:06	11 16:38 (84)	17:47	19:24	20:02		20:39	21:08
12	07:59	16:28 (84)	07:30	07:44	06:47		06:02	05:40
	17:07	11 16:39 (84)	17:49	19:25	20:04		20:40	21:09
13	07:59	16:28 (84)	07:29	07:42	06:46		06:01	05:40
	17:08	12 16:40 (84)	17:50	19:26	20:05		20:41	21:09
14	07:59	16:29 (84)	07:27	07:40	06:44		05:59	05:40
	17:09	13 16:42 (84)	17:52	19:28	20:06		20:42	21:10
15	07:58	16:28 (84)	07:26	07:39	06:42		05:58	05:40
	17:11	15 16:43 (84)	17:53	19:29	20:07		20:44	21:10
16	07:58	16:30 (84)	07:24	07:37	06:41		05:57	05:40
	17:12	15 16:45 (84)	17:54	19:30	20:09		20:45	21:11
17	07:57	16:30 (84)	07:23	07:35	06:39		05:56	05:40
	17:13	16 16:46 (84)	17:56	19:31	20:10		20:46	21:11
18	07:56	16:30 (84)	07:21	07:33	06:37		05:55	05:40
	17:14	17 16:47 (84)	17:57	19:33	20:11		20:47	21:12
19	07:56	16:31 (84)	07:20	07:31	06:35		05:54	05:40
	17:16	18 16:49 (84)	17:58	19:34	20:12		20:48	21:12
20	07:55	16:32 (84)	07:18	07:29	06:34		05:53	05:40
	17:17	16 16:48 (84)	18:00	19:35	20:14		20:49	21:12
21	07:54	16:32 (84)	07:17	07:28	06:32		05:52	05:40
	17:18	16 16:48 (84)	18:00	19:36	20:15		20:50	21:13
22	07:54	16:33 (84)	07:15	07:26	06:30		05:51	05:40
	17:20	14 16:47 (84)	18:01	19:38	20:16		20:51	21:13
23	07:53	16:35 (84)	07:13	07:24	06:29		05:50	05:41
	17:21	11 16:46 (84)	18:03	19:39	20:17		20:52	21:13
24	07:52	16:36 (84)	07:12	07:22	06:27		05:49	05:41
	17:22	9 16:45 (84)	18:04	19:40	20:18		20:53	21:13
25	07:51	16:40 (84)	07:10	07:20	06:26		05:49	05:41
	17:24	2 16:42 (84)	18:05	19:41	20:20		20:54	21:13
26	07:50		07:08	07:18	06:24		05:48	05:42
	17:25		18:07	19:43	20:21		20:55	21:13
27	07:49		07:07	07:16	06:23		05:47	05:42
	17:26		18:08	19:44	20:22		20:56	21:13
28	07:48		07:05	07:15	06:21		05:46	05:42
	17:28		18:09	19:45	20:23		20:57	21:13
29	07:47			07:13	06:20		05:46	05:43
	17:29			19:46	20:25		20:58	21:13
30	07:46			07:11	19:22 (83)	06:18	05:45	05:43
	17:31			19:48	4 19:26 (83)	20:26	20:59	21:13
31	07:45			07:09	19:21 (83)		05:44	
	17:32			19:49	6 19:27 (83)		21:00	
Potential sun hours	288	292	369	403	458	464		
Total, worst case		292		10		114		
Sun reduction		0.57		0.59		0.61		
Oper. time red.		0.98		0.98		0.98		
Wind dir. red.		0.56		0.61		0.61		
Total reduction		0.31		0.35		0.36		
Total, real		90		3		41		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H175 - H175

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:44	06:11	06:47	07:22	07:01	07:40	16:09 (84)
	21:13	20:52	20:04	19:09	17:15	16:47	11 16:20 (84)
2	05:44	06:12	06:48	07:23	07:03	07:41	16:11 (84)
	21:13	20:51	20:02	19:07	17:14	16:47	9 16:20 (84)
3	05:45	06:13	06:49	19:20 (83)	07:24	07:42	16:11 (84)
	21:13	20:49	20:01	8 19:28 (83)	19:05	17:12	16:46 9 16:20 (84)
4	05:46	06:14	06:50	19:17 (83)	07:25	07:05	07:44 16:12 (84)
	21:13	20:48	19:59	13 19:30 (83)	19:03	17:11	16:46 7 16:19 (84)
5	05:46	06:15	06:51	19:15 (83)	07:27	07:07	07:45 16:13 (84)
	21:12	20:47	19:57	16 19:31 (83)	19:01	17:10	16:46 6 16:19 (84)
6	05:47	06:17	06:52	19:14 (83)	07:28	07:08	07:46 16:13 (84)
	21:12	20:46	19:55	17 19:31 (83)	18:58	17:08	16:46 5 16:18 (84)
7	05:47	06:18	06:54	19:13 (83)	07:29	07:09	07:47 15:47 (85)
	21:12	20:44	19:53	16 19:29 (83)	18:56	17:07	16:45 9 16:18 (84)
8	05:48	06:19	06:55	19:12 (83)	07:30	07:11	07:48 15:46 (85)
	21:11	20:43	19:52	15 19:27 (83)	18:54	17:06	16:45 11 16:18 (84)
9	05:49	06:20	06:56	19:12 (83)	07:32	07:12	07:49 15:45 (85)
	21:11	20:41	19:50	13 19:25 (83)	18:52	17:05	16:45 13 16:18 (84)
10	05:50	06:21	06:57	19:11 (83)	07:33	07:13	07:49 15:45 (85)
	21:11	20:40	19:48	12 19:23 (83)	18:51	17:04	16:45 13 16:18 (84)
11	05:50	06:22	06:58	19:12 (83)	07:34	07:15	07:50 15:45 (85)
	21:10	20:39	19:46	10 19:22 (83)	18:49	17:02	16:45 13 15:58 (85)
12	05:51	06:23	06:59	19:13 (83)	07:35	07:16	07:51 15:45 (85)
	21:10	20:37	19:44	7 19:20 (83)	18:47	17:01	16:45 14 15:59 (85)
13	05:52	06:25	07:01	19:13 (83)	07:37	07:17	07:52 15:45 (85)
	21:09	20:36	19:42	5 19:18 (83)	18:45	17:00	16:45 15 16:00 (85)
14	05:53	06:26	07:02	19:15 (83)	07:38	07:19	07:53 15:44 (85)
	21:08	20:34	19:40	1 19:16 (83)	18:44	16:59	16:46 16 16:00 (85)
15	05:54	06:27	07:03		07:39	07:20	07:54 15:45 (85)
	21:08	20:33	19:39		18:42	16:58	16:46 16 16:01 (85)
16	05:55	06:28	07:04		07:40	07:21	07:54 15:45 (85)
	21:07	20:31	19:37		18:40	16:57	16:46 17 16:02 (85)
17	05:56	06:29	07:05		07:42	07:23	16:13 (84) 07:55 15:45 (85)
	21:06	20:30	19:35		18:38	16:56	3 16:16 (84) 16:46 17 16:02 (85)
18	05:57	06:30	07:06		07:43	07:24	16:10 (84) 07:56 15:45 (85)
	21:06	20:28	19:33		18:37	16:55	9 16:19 (84) 16:47 18 16:03 (85)
19	05:57	06:32	07:08		07:44	07:25	16:10 (84) 07:56 15:46 (85)
	21:05	20:26	19:31		18:35	16:54	11 16:21 (84) 16:47 18 16:04 (85)
20	05:58	06:33	07:09		07:45	07:27	16:08 (84) 07:57 15:46 (85)
	21:04	20:25	19:29		18:33	16:54	14 16:22 (84) 16:47 18 16:04 (85)
21	05:59	06:34	07:10		07:47	07:28	16:08 (84) 07:58 15:47 (85)
	21:03	20:23	19:27		18:32	16:53	16 16:24 (84) 16:48 18 16:05 (85)
22	06:00	06:35	07:11		07:48	07:29	16:08 (84) 07:58 15:47 (85)
	21:02	20:21	19:25		18:30	16:52	16 16:24 (84) 16:48 18 16:05 (85)
23	06:01	06:36	07:12		07:49	07:31	16:07 (84) 07:59 15:48 (85)
	21:01	20:20	19:24		18:29	16:51	18 16:25 (84) 16:49 18 16:06 (85)
24	06:02	06:37	07:13		07:51	07:32	16:08 (84) 07:59 15:48 (85)
	21:01	20:18	19:22		18:27	16:51	17 16:25 (84) 16:49 18 16:06 (85)
25	06:03	06:39	07:15		07:52	07:33	16:08 (84) 07:59 15:48 (85)
	21:00	20:16	19:20		18:25	16:50	16 16:24 (84) 16:50 18 16:06 (85)
26	06:04	06:40	07:16		07:53	07:34	16:08 (84) 08:00 15:49 (85)
	20:59	20:15	19:18		18:24	16:49	15 16:23 (84) 16:51 18 16:07 (85)
27	06:06	06:41	07:17		07:55	07:35	16:08 (84) 08:00 15:50 (85)
	20:58	20:13	19:16		18:22	16:49	14 16:22 (84) 16:51 17 16:07 (85)
28	06:07	06:42	07:18		07:56	07:37	16:09 (84) 08:00 15:50 (85)
	20:56	20:11	19:14		18:21	16:48	13 16:22 (84) 16:52 17 16:07 (85)
29	06:08	06:43	07:19		07:57	07:38	16:09 (84) 08:01 15:51 (85)
	20:55	20:10	19:12		18:19	16:48	12 16:21 (84) 16:53 16 16:07 (85)
30	06:09	06:44	07:21		07:59	07:39	16:09 (84) 08:01 15:52 (85)
	20:54	20:08	19:11		18:18	16:47	11 16:20 (84) 16:54 15 16:07 (85)
31	06:10	06:46			08:00		08:01 15:53 (85)
	20:53	20:06			18:17		16:54 15 16:08 (85)
Potential sun hours	470	435	377	341	289	276	
Total, worst case			133		185	443	
Sun reduction			0.69		0.50	0.49	
Oper. time red.			0.98		0.98	0.98	
Wind dir. red.			0.61		0.56	0.55	
Total reduction			0.41		0.27	0.26	
Total, real			54		50	117	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H198 - H198

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:01	16:09 (83)	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40	15:57 (83)
	16:56	19 16:28 (83)	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47	15 16:12 (83)
2	08:01	16:10 (83)	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41	15:58 (83)
	16:56	19 16:29 (83)	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:47	15 16:13 (83)
3	08:01	16:10 (83)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42	15:57 (83)
	16:57	19 16:29 (83)	17:36	18:13	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:12	16:46	17 16:14 (83)
4	08:01	16:10 (83)	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44	15:57 (83)
	16:58	19 16:29 (83)	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46	18 16:15 (83)
5	08:01	16:11 (83)	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45	15:57 (83)
	16:59	18 16:29 (83)	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46	18 16:15 (83)
6	08:01	16:11 (83)	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:52	07:28	07:08	07:46	15:58 (83)
	17:00	19 16:30 (83)	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:46	18 16:16 (83)
7	08:01	16:12 (83)	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47	15:58 (83)
	17:01	18 16:30 (83)	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45	18 16:16 (83)
8	08:01	16:13 (83)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48	15:58 (83)
	17:02	17 16:30 (83)	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45	19 16:17 (83)
9	08:00	16:13 (83)	07:34	07:49	06:53	06:05	05:41	05:49	06:20	06:56	07:32	07:12	07:49	15:58 (83)
	17:04	17 16:30 (83)	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45	19 16:17 (83)
10	08:00	16:14 (83)	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50	15:59 (83)
	17:05	16 16:30 (83)	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45	19 16:18 (83)
11	08:00	16:15 (83)	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50	15:59 (83)
	17:06	15 16:30 (83)	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45	19 16:18 (83)
12	08:00	16:16 (83)	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51	16:00 (83)
	17:07	14 16:30 (83)	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45	18 16:18 (83)
13	07:59	16:17 (83)	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52	16:00 (83)
	17:08	12 16:29 (83)	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45	18 16:18 (83)
14	07:59	16:19 (83)	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53	16:00 (83)
	17:09	10 16:29 (83)	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:44	16:59	16:46	17 16:17 (83)
15	07:58	16:20 (83)	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54	16:01 (83)
	17:11	7 16:27 (83)	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46	17 16:18 (83)
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54	16:46	17 16:18 (83)
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46	17 16:18 (83)	
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55	16:46	17 16:19 (83)
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:30	19:35	18:38	16:56	16:46	17 16:19 (83)	
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56	16:46	17 16:19 (83)
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47	16 16:18 (83)	
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:25	07:56	16:46	17 16:19 (83)
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47	16 16:19 (83)	
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57	16:46	17 16:19 (83)
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47	16 16:19 (83)	
21	07:54	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58	16:46	17 16:19 (83)
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48	16 16:20 (83)	
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58	16:46	17 16:19 (83)
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48	16 16:20 (83)	
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59	16:46	17 16:19 (83)
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49	16 16:21 (83)	
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59	16:46	17 16:19 (83)
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49	16 16:21 (83)	
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	07:59	16:46	17 16:19 (83)
	17:24	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50	16 16:21 (83)	
26	07:50	07:08	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	08:00	16:46	17 16:19 (83)
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:51	17 16:23 (83)	
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	16:00 (83)	08:00	16:06 (83)
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	6 16:06 (83)	16:51	17 16:23 (83)
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	15:59 (83)	08:00	16:07 (83)
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	10 16:09 (83)	16:52	17 16:24 (83)
29	07:47	07:13	06:19	05:46	05:43	05:43	06:08	06:43	07:19	07:57	07:38	15:58 (83)	08:01	16:07 (83)
	17:29	19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	12 16:10 (83)	16:53	17 16:24 (83)	
30	07:46	07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	15:57 (83)	08:01	16:08 (83)	
	17:31	19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:47	14 16:11 (83)	16:54	18 16:26 (83)	
31	07:45	07:09	05:44	05:44	05:44	06:10	06:46	07:23	08:00	08:00	16:54	08:01	16:09 (83)	
	17:32	19:49	21:00	21:00	21:00	20:53	20:06	19:11	18:17	16:54	18 16:27 (83)	16:54	18 16:27 (83)	
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	531	
Total, worst case	239										42		0.51	
Sun reduction	0.57										0.50		0.49	
Oper. time red.	0.98										0.98		0.98	
Wind dir. red.	0.56										0.56		0.56	
Total reduction	0.31										0.27		0.27	
Total, real	74										11		141	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H199 - H199

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:25	07:57
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H200 - H200

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:56	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:41 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:46 21:13	06:14 20:48	06:50 19:59	07:26 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:16 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:10 20:33	05:42 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:08	07:46 16:46
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:48 21:12	06:18 20:44	06:54 19:54	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:03	07:36 17:43	06:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:04	07:34 17:45	06:50 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	06:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:51 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:03	07:51 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:48 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:24 20:37	07:00 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	06:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	07:19 16:59	07:53 16:46
15	07:58 17:11	07:26 17:53	06:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	06:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:32	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:57 21:06	06:30 20:28	07:07 19:33	07:43 18:37	07:24 16:55	07:56 16:47
19	07:56 17:16	07:20 17:59	06:31 19:34	06:36 20:12	05:54 20:48	05:40 21:12	05:58 21:05	06:32 20:27	07:08 19:31	07:44 18:35	07:26 16:55	07:57 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:46 18:33	07:27 16:54	07:57 16:47
21	07:55 17:18	07:17 18:00	06:28 19:37	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	06:26 19:38	06:31 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:14 18:03	06:24 19:39	06:29 20:17	05:50 20:52	05:41 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:29	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	05:49 20:54	05:41 21:13	06:02 21:01	06:37 20:18	07:14 19:22	07:51 18:27	07:32 16:51	07:59 16:49
25	07:51 17:24	07:10 18:05	06:20 19:42	06:26 20:20	05:49 20:55	05:41 21:13	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:33 16:50	08:00 16:50
26	07:50 17:25	07:09 18:07	06:18 19:43	06:24 20:21	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:51
27	07:49 17:26	07:07 18:08	06:17 19:44	06:23 20:22	05:47 20:56	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:36 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	06:15 19:45	06:21 20:24	05:46 20:57	05:42 21:14	06:07 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:47	06:13 20:25	06:20 20:58	05:46 20:58	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:12	07:57 18:19	07:38 16:48	08:01 16:53
30	07:46 17:31	07:03 19:48	06:11 20:26	06:18 20:59	05:45 20:59	05:43 21:14	06:09 20:54	06:44 20:08	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:54
31	07:45 17:32	07:02 19:49	06:09 20:27	06:16 21:00	05:44 21:00	06:10 20:53	06:46 20:06	08:00 20:06	08:00 18:17	08:00 16:54	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H201 - H201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01 16:56	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	19:27 (77) 19:40 (77)	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	19:26 (77) 19:38 (77)	07:23 19:07	17:15 17:14	07:42 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	19:25 (77) 19:36 (77)	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:42 21:13	06:14 20:48	06:50 19:59	19:24 (77) 19:34 (77)	07:26 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:42 21:13	06:16 20:47	06:51 19:57	19:24 (77) 19:32 (77)	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:10 20:33	05:42 21:05	05:42 21:12	06:17 20:46	06:53 19:55	19:23 (77) 19:31 (77)	07:28 19:00	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:48 21:12	06:18 20:44	06:54 19:54	19:24 (77) 19:29 (77)	07:29 18:56	07:10 17:07	07:47 16:46
8	08:01 17:03	07:36 17:43	07:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	19:24 (77) 19:27 (77)	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:04	07:34 17:45	07:50 19:21	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45	
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	19:27 (77) 18:51	07:33 17:04	07:14 16:45	07:50 16:45
11	08:00 17:06	07:32 17:48	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:51 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:03	07:51 16:45	
12	08:00 17:07	07:30 17:49	07:44 19:25	06:48 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:24 20:37	07:00 19:44	19:31 (77) 18:47	07:35 17:01	07:16 16:45	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:27	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:09	06:25 20:36	07:01 19:42	19:27 (77) 18:45	07:37 17:00	07:18 16:46	07:52 16:46
14	07:59 17:09	07:27 17:52	07:41 19:28	06:44 20:06	06:00 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	19:24 (77) 18:44	07:38 16:59	07:19 16:46	07:53 16:46
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:08	06:02 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	19:23 (77) 18:42	07:39 16:58	07:20 16:46	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	06:01 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	19:22 (77) 18:40	07:40 16:57	07:22 16:46	07:55 16:46
17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 20:10	06:02 20:46	05:40 21:11	05:56 21:07	06:29 20:30	07:05 19:35	19:21 (77) 18:39	07:42 16:56	07:23 16:46	07:55 16:46
18	07:57 17:14	07:21 17:57	07:33 19:33	06:37 20:11	06:03 20:47	05:40 21:12	05:57 21:06	06:31 20:28	07:07 19:33	19:20 (77) 18:37	07:43 16:55	07:24 16:47	07:56 16:47
19	07:56 17:16	07:20 17:59	07:31 19:34	06:36 20:13	06:04 20:48	05:40 21:12	05:58 21:05	06:32 20:27	07:08 19:31	19:19 (77) 18:35	07:44 16:55	07:26 16:47	07:57 16:47
20	07:55 17:17	07:18 18:00	07:30 19:35	06:34 20:14	06:05 20:49	05:40 21:12	05:59 21:04	06:33 20:25	07:09 19:29	19:18 (77) 18:34	07:46 16:54	07:27 16:47	07:57 16:47
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	06:06 20:50	05:40 21:13	06:00 21:03	06:34 20:23	07:10 19:28	19:17 (77) 18:32	07:47 16:53	07:28 16:48	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	06:07 20:51	05:40 21:13	06:01 21:03	06:35 20:22	07:11 19:26	19:16 (77) 18:30	07:48 16:52	07:29 16:48	07:58 16:48
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:17	06:08 20:53	05:41 21:13	06:02 21:02	06:36 20:20	07:12 19:24	19:15 (77) 18:29	07:49 16:51	07:31 16:49	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	06:09 20:54	05:41 21:13	06:03 21:01	06:38 20:18	07:14 19:22	19:14 (77) 18:27	07:51 16:51	07:32 16:49	07:59 16:49
25	07:51 17:24	07:10 18:05	07:20 19:42	06:26 20:20	06:10 20:55	05:41 21:13	06:04 21:00	06:39 20:17	07:15 19:20	19:13 (77) 18:26	07:52 16:50	07:33 16:50	08:00 16:50
26	07:50 17:25	07:09 18:07	07:18 19:43	06:24 20:21	06:11 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	19:12 (77) 18:24	07:53 16:50	07:34 16:51	08:00 16:51
27	07:49 17:27	07:07 18:08	07:17 19:44	06:23 20:22	06:12 20:57	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:16	19:11 (77) 18:23	07:55 16:49	07:36 16:51	08:00 16:51
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:24	06:13 20:57	05:42 21:14	06:07 20:57	06:42 20:11	07:18 19:14	19:10 (77) 18:21	07:56 16:48	07:37 16:52	08:01 16:52
29	07:47 17:29		07:13 19:47	06:20 20:25	06:14 20:58	05:43 21:14	06:08 20:56	06:43 20:10	07:20 19:13	19:09 (77) 18:20	07:57 16:48	07:38 16:48	08:01 16:53
30	07:46 17:31		07:11 19:48	06:18 20:26	06:15 20:59	05:43 21:14	06:09 20:54	06:45 20:08	07:21 19:11	19:08 (77) 18:18	07:59 16:47	07:39 16:47	08:01 16:54
31	07:45 17:32		07:09 19:49		06:16 21:00	05:44 21:14	06:10 20:53	06:46 20:06	07:22 19:39 (77)	19:07 (77) 18:17	08:00 16:47	08:01 16:55	08:01 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	
Total, worst case				83				17	70				
Sun reduction				0.61				0.74	0.69				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.61				0.61	0.61				
Total reduction				0.37				0.44	0.41				
Total, real				30				8	29				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H202 - H202

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:00	16:45
14	07:59	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H203 - H203

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:01	16:08 (79)	07:44	07:04	07:43 (80)	07:07	06:17	05:44	20:15 (77)	
	16:56	10 16:18 (79)	17:33	18:11	15 07:58 (80)	19:50	20:27	21:01	20:35 (77)	
2	08:01	16:09 (79)	07:43	07:02	07:46 (80)	07:06	06:15	05:43	20:16 (77)	
	16:57	8 16:17 (79)	17:35	18:12	8 07:54 (80)	19:52	20:28	21:02	19 20:35 (77)	
3	08:01	16:11 (79)	07:42	07:00		07:04	06:14	05:43	20:16 (77)	
	16:58	6 16:17 (79)	17:36	18:13		19:53	20:30	21:03	18 20:34 (77)	
4	08:01	16:13 (79)	07:41	06:58		07:02	06:12	05:42	20:17 (77)	
	16:58	3 16:16 (79)	17:38	18:15		19:54	20:31	21:04	18 20:35 (77)	
5	08:01		07:40	06:57		07:00	06:11	05:42	20:18 (77)	
	16:59		17:39	18:16		19:55	20:32	21:04	17 20:35 (77)	
6	08:01		07:38	06:55		06:58	06:10	05:42	20:17 (77)	
	17:00		17:41	18:17		19:57	20:33	21:05	17 20:34 (77)	
7	08:01		07:37	06:53		06:57	06:08	05:41	20:18 (77)	
	17:02		17:42	18:19		19:58	20:34	21:06	16 20:34 (77)	
8	08:01		07:36	07:51		06:55	06:07	05:41	20:19 (77)	
	17:03		17:43	18:20		19:59	20:36	21:07	15 20:34 (77)	
9	08:01		07:34	07:50		06:53	06:06	05:41	20:19 (77)	
	17:04		17:45	19:21		20:00	20:37	21:07	15 20:34 (77)	
10	08:00		07:33	07:48		06:51	06:04	05:40	20:19 (77)	
	17:05		17:46	19:23		20:01	20:38	21:08	15 20:34 (77)	
11	08:00		07:32	07:46		06:49	06:03	05:40	20:20 (77)	
	17:06		17:48	4 07:57 (80)	19:24	20:03	20:39	21:08	14 20:34 (77)	
12	08:00		07:30	07:44		06:48	06:02	05:40	20:21 (77)	
	17:07		17:49	8 08:00 (80)	19:25	20:04	20:40	21:09	13 20:34 (77)	
13	07:59		07:29	07:42		06:46	06:01	05:40	20:21 (77)	
	17:08		17:50	12 08:02 (80)	19:27	20:05	20:42	21:10	13 20:34 (77)	
14	07:59		07:27	07:49 (80)	07:41	06:44	06:00	05:40	20:22 (77)	
	17:10		17:52	14 08:03 (80)	19:28	20:06	20:43	21:10	12 20:34 (77)	
15	07:58		07:26	07:47 (80)	07:39	06:42	05:58	05:40	20:22 (77)	
	17:11		17:53	17 08:04 (80)	19:29	20:08	20:44	21:11	12 20:34 (77)	
16	07:58		07:24	07:46 (80)	07:37	06:41	05:57	05:40	20:23 (77)	
	17:12		17:55	19 08:05 (80)	19:30	20:09	20:45	21:11	10 20:33 (77)	
17	07:57		07:23	07:44 (80)	07:35	06:39	05:56	05:40	20:23 (77)	
	17:13		17:56	22 08:06 (80)	19:32	20:10	20:46	21:11	10 20:33 (77)	
18	07:57		07:21	07:42 (80)	07:33	06:37	05:55	05:40	20:24 (77)	
	17:15		17:57	24 08:06 (80)	19:33	20:11	20:47	5 20:22 (77)	21:12	9 20:33 (77)
19	07:56		07:20	07:41 (80)	07:31	06:36	05:54	05:40	20:24 (77)	
	17:16		17:59	25 08:06 (80)	19:34	20:13	20:48	7 20:23 (77)	21:12	9 20:33 (77)
20	07:55		07:18	07:39 (80)	07:30	06:34	05:53	05:40	20:24 (77)	
	17:17		18:00	27 08:06 (80)	19:35	20:14	20:49	9 20:25 (77)	21:12	9 20:33 (77)
21	07:55		07:17	07:38 (80)	07:28	06:32	05:52	05:40	20:25 (77)	
	17:18		18:00	29 08:07 (80)	19:37	20:15	20:50	10 20:26 (77)	21:13	9 20:34 (77)
22	07:54		07:15	07:37 (80)	07:26	06:31	05:51	05:41	20:25 (77)	
	17:20		18:01	29 08:06 (80)	19:38	20:16	20:51	11 20:26 (77)	21:13	9 20:34 (77)
23	07:53		07:14	07:37 (80)	07:24	06:29	05:50	05:41	20:25 (77)	
	17:21		18:03	28 08:05 (80)	19:39	20:17	20:53	12 20:27 (77)	21:13	9 20:34 (77)
24	07:52		07:12	07:38 (80)	07:22	06:27	05:50	05:41	20:25 (77)	
	17:22		18:04	27 08:05 (80)	19:40	20:19	20:54	14 20:28 (77)	21:13	9 20:34 (77)
25	07:51		07:10	07:38 (80)	07:20	06:26	05:49	05:41	20:25 (77)	
	17:24		18:05	26 08:04 (80)	19:42	20:20	20:55	15 20:29 (77)	21:13	10 20:35 (77)
26	07:50		07:09	07:38 (80)	07:18	06:24	05:48	05:42	20:25 (77)	
	17:25		18:07	25 08:03 (80)	19:43	20:21	20:56	15 20:30 (77)	21:14	10 20:35 (77)
27	07:49		07:07	07:40 (80)	07:17	06:23	05:47	05:42	20:25 (77)	
	17:27		18:08	22 08:02 (80)	19:44	20:22	20:57	17 20:31 (77)	21:14	10 20:35 (77)
28	07:48		07:05	07:41 (80)	07:15	06:21	05:46	05:42	20:25 (77)	
	17:28		18:10	19 08:00 (80)	19:45	20:24	20:57	17 20:31 (77)	21:14	12 20:37 (77)
29	07:47				07:13	06:20	05:46	05:43	20:25 (77)	
	17:29				19:47	20:25	20:58	18 20:33 (77)	21:14	12 20:37 (77)
30	07:46				07:11	06:18	05:45	05:43	20:25 (77)	
	17:31				19:48	20:26	20:59	18 20:33 (77)	21:14	13 20:38 (77)
31	07:45				07:09		05:45			
	17:32				19:49		21:00	19 20:35 (77)		
Potential sun hours	287	292	369	403	458	464				
Total, worst case	27	377	23	189	384					
Sun reduction	0.57	0.59	0.59	0.65	0.70					
Oper. time red.	0.98	0.98	0.98	0.98	0.98					
Wind dir. red.	0.55	0.64	0.64	0.67	0.67					
Total reduction	0.31	0.37	0.37	0.42	0.45					
Total, real	8	139	8	80	174					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H203 - H203

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	20:24 (77)	06:11	06:47	07:22	07:01	07:40		
	21:13	14 20:38 (77)	20:52	20:04	19:09	17:15	16:47		
2	05:44	20:25 (77)	06:12	06:48	07:23	07:03	07:42		
	21:13	14 20:39 (77)	20:51	20:03	19:07	17:14	16:47		
3	05:45	20:24 (77)	06:13	06:49	07:24	07:04	07:43		
	21:13	15 20:39 (77)	20:50	20:01	19:05	17:13	16:46		
4	05:46	20:24 (77)	06:14	06:50	07:26	07:05	07:44		
	21:13	16 20:40 (77)	20:48	19:59	19:03	17:11	16:46		
5	05:46	20:25 (77)	06:16	06:51	07:27	07:07	07:45		
	21:13	15 20:40 (77)	20:47	19:57	19:01	17:10	16:46		
6	05:47	20:24 (77)	06:17	06:53	07:28	07:08	07:46		
	21:12	16 20:40 (77)	20:46	19:55	19:00	17:09	16:46		
7	05:48	20:24 (77)	06:18	06:54	07:29	07:10	07:47		
	21:12	17 20:41 (77)	20:44	19:54	18:56	17:07	16:46		
8	05:48	20:24 (77)	06:19	06:55	07:30	07:11	07:48		
	21:12	18 20:42 (77)	20:43	19:52	18:54	17:06	16:45	1 16:02 (79)	
9	05:49	20:23 (77)	06:20	06:56	07:32	07:12	07:49	15:59 (79)	
	21:11	19 20:42 (77)	20:42	19:50	18:52	17:05	16:45	6 16:05 (79)	
10	05:50	20:24 (77)	06:21	06:57	07:33	07:14	07:50	15:59 (79)	
	21:11	18 20:42 (77)	20:40	19:48	18:51	17:04	16:45	7 16:06 (79)	
11	05:51	20:24 (77)	06:22	06:58	07:34	07:15	07:51	15:58 (79)	
	21:10	19 20:43 (77)	20:39	19:46	18:49	17:03	16:45	10 16:08 (79)	
12	05:51	20:24 (77)	06:24	07:00	07:35	07:16	07:51	15:58 (79)	
	21:10	19 20:43 (77)	20:37	19:44	18:47	12 08:30 (80)	17:01	16:45	11 16:09 (79)
13	05:52	20:23 (77)	06:25	07:01	07:37	08:15 (80)	07:18	07:52	15:59 (79)
	21:09	19 20:42 (77)	20:36	19:43	18:45	17 08:32 (80)	17:00	16:46	11 16:10 (79)
14	05:53	20:23 (77)	06:26	07:02	07:38	08:13 (80)	07:19	07:53	15:59 (79)
	21:09	18 20:41 (77)	20:34	19:41	18:44	20 08:33 (80)	16:59	16:46	12 16:11 (79)
15	05:54	20:24 (77)	06:27	07:03	07:39	08:12 (80)	07:20	07:54	15:58 (79)
	21:08	17 20:41 (77)	20:33	19:39	18:42	23 08:35 (80)	16:58	16:46	13 16:11 (79)
16	05:55	20:24 (77)	06:28	07:04	07:40	08:10 (80)	07:22	07:55	15:59 (79)
	21:07	17 20:41 (77)	20:31	19:37	18:40	26 08:36 (80)	16:57	16:46	13 16:12 (79)
17	05:56	20:24 (77)	06:29	07:05	07:42	08:09 (80)	07:23	07:55	15:59 (79)
	21:07	16 20:40 (77)	20:30	19:35	18:39	27 08:36 (80)	16:56	16:46	14 16:13 (79)
18	05:57	20:24 (77)	06:31	07:07	07:43	08:09 (80)	07:24	07:56	15:59 (79)
	21:06	15 20:39 (77)	20:28	19:33	18:37	28 08:37 (80)	16:56	16:47	14 16:13 (79)
19	05:58	20:25 (77)	06:32	07:08	07:44	08:08 (80)	07:26	07:57	16:00 (79)
	21:05	14 20:39 (77)	20:27	19:31	18:35	29 08:37 (80)	16:55	16:47	14 16:14 (79)
20	05:59	20:24 (77)	06:33	07:09	07:46	08:07 (80)	07:27	07:57	16:00 (79)
	21:04	13 20:37 (77)	20:25	19:29	18:34	30 08:37 (80)	16:54	16:47	13 16:13 (79)
21	06:00	20:24 (77)	06:34	07:10	07:47	08:09 (80)	07:28	07:58	16:01 (79)
	21:03	12 20:36 (77)	20:23	19:28	18:32	28 08:37 (80)	16:53	16:48	13 16:14 (79)
22	06:01	20:25 (77)	06:35	07:11	07:48	08:10 (80)	07:29	07:58	16:01 (79)
	21:03	11 20:36 (77)	20:22	19:26	18:30	27 08:37 (80)	16:52	16:48	13 16:14 (79)
23	06:02	20:26 (77)	06:36	07:12	07:49	08:11 (80)	07:31	07:59	16:02 (79)
	21:02	9 20:35 (77)	20:20	19:24	18:29	25 08:36 (80)	16:52	16:49	13 16:15 (79)
24	06:03	20:26 (77)	06:38	07:14	07:51	08:13 (80)	07:32	07:59	16:02 (79)
	21:01	8 20:34 (77)	20:18	19:22	18:27	23 08:36 (80)	16:51	16:50	13 16:15 (79)
25	06:04	20:27 (77)	06:39	07:15	07:52	08:14 (80)	07:33	08:00	16:03 (79)
	21:00	6 20:33 (77)	20:17	19:20	18:26	21 08:35 (80)	16:50	16:50	14 16:17 (79)
26	06:05	20:28 (77)	06:40	07:16	07:53	08:16 (80)	07:34	08:00	16:03 (79)
	20:59	4 20:32 (77)	20:15	19:18	18:24	19 08:35 (80)	16:50	16:51	14 16:17 (79)
27	06:06	20:30 (77)	06:41	07:17	07:55	08:17 (80)	07:36	08:00	16:04 (79)
	20:58	1 20:31 (77)	20:13	19:16	18:23	16 08:33 (80)	16:49	16:51	13 16:17 (79)
28	06:07		06:42	07:18	07:56	08:18 (80)	07:37	08:01	16:04 (79)
	20:57		20:11	19:14	18:21	14 08:32 (80)	16:48	16:52	13 16:17 (79)
29	06:08		06:43	07:20	07:57	08:20 (80)	07:38	08:01	16:06 (79)
	20:56		20:10	19:13	18:20	11 08:31 (80)	16:48	16:53	12 16:18 (79)
30	06:09		06:45	07:21	07:59	08:21 (80)	07:39	08:01	16:06 (79)
	20:54		20:08	19:11	18:18	8 08:29 (80)	16:48	16:54	12 16:18 (79)
31	06:10		06:46		08:00	08:23 (80)		08:01	16:07 (79)
	20:53		20:06		18:17	3 08:26 (80)		16:55	11 16:18 (79)
Potential sun hours	470	435	377	341		289	276		
Total, worst case	380			407			280		
Sun reduction	0.76			0.63			0.49		
Oper. time red.	0.98			0.98			0.98		
Wind dir. red.	0.67			0.64			0.55		
Total reduction	0.49			0.39			0.26		
Total, real	187			160			74		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H204 - H204

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Main shadow calculation table with columns for months (January-December) and rows for each day of the year, including sun rise/set times and reduction factors.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout with columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time).

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H206 - H206

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:34	07:04 18:11	07:24 (76) 07:08	07:42 (74) 06:17	05:44 21:01
2	08:02 16:57	07:43 17:35	07:02 18:12	07:23 (76) 07:06	07:42 (74) 06:15	05:44 21:02
3	08:02 16:58	07:42 17:37	07:00 18:14	07:21 (76) 07:04	07:42 (74) 06:14	05:43 21:03
4	08:02 16:59	07:41 17:38	06:59 18:15	07:23 (76) 07:02	07:42 (74) 06:13	05:43 21:04
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	07:42 (74) 06:11	05:42 21:05
6	08:01 17:01	07:39 17:41	06:55 18:18	06:59 19:57	07:43 (74) 06:10	05:42 21:05
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	07:44 (74) 06:08	05:42 21:06
8	08:01 17:03	07:36 17:44	07:52 18:20	06:55 19:59	07:44 (74) 06:07	05:41 21:07
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	07:45 (74) 06:06	05:41 21:07
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	07:46 (74) 06:05	05:41 21:08
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	07:49 (74) 06:03	05:40 21:09
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	07:51 (74) 06:02	05:40 21:09
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:05	07:53 (74) 06:01	05:40 21:10
14	07:59 17:10	07:28 17:52	07:41 19:28	08:03 (74) 08:20 (74)	06:44 20:07	05:40 21:10
15	07:59 17:11	07:26 17:53	07:39 19:29	07:59 (74) 08:23 (74)	06:43 20:08	05:40 21:11
16	07:58 17:12	07:25 17:55	07:37 19:31	07:57 (74) 08:25 (74)	06:41 20:09	05:40 21:11
17	07:57 17:13	07:23 17:56	07:35 19:32	07:55 (74) 08:26 (74)	06:39 20:10	05:40 21:12
18	07:57 17:15	07:22 17:57	07:33 19:33	07:54 (74) 08:28 (74)	06:38 20:12	05:40 21:12
19	07:56 17:16	07:20 17:59	07:32 19:34	07:52 (74) 08:29 (74)	06:36 20:13	05:40 21:12
20	07:56 17:17	07:19 18:00	07:30 19:36	07:50 (74) 08:30 (74)	06:34 20:14	05:40 21:13
21	07:55 17:19	07:17 18:00	07:28 19:37	07:48 (74) 08:31 (74)	06:33 20:15	05:41 21:13
22	07:54 17:20	07:15 18:02	07:26 19:38	07:46 (74) 08:31 (74)	06:31 20:16	05:41 21:13
23	07:53 17:21	07:14 18:03	07:24 19:39	07:45 (74) 08:31 (74)	06:29 20:18	05:41 21:13
24	07:52 17:23	07:12 18:04	07:22 19:41	07:44 (74) 08:31 (74)	06:28 20:19	05:41 21:14
25	07:52 17:24	07:11 18:06	07:21 19:42	07:44 (74) 08:32 (74)	06:26 20:20	05:41 21:14
26	07:51 17:25	07:09 18:07	07:19 19:43	07:43 (74) 08:32 (74)	06:24 20:21	05:42 21:14
27	07:50 17:27	07:07 18:08	07:17 19:44	07:43 (74) 08:32 (74)	06:23 20:23	05:42 21:14
28	07:49 17:28	07:05 18:10	07:15 19:46	07:42 (74) 08:31 (74)	06:21 20:24	05:43 21:14
29	07:48 17:30		07:13 19:47	07:42 (74) 08:31 (74)	06:20 20:25	05:43 21:14
30	07:47 17:31		07:11 19:48	07:41 (74) 08:30 (74)	06:18 20:26	05:44 21:14
31	07:46 17:32		07:09 19:49	07:42 (74) 08:30 (74)	06:18 21:00	05:44 21:14
Potential sun hours	287	292	369	403	458	464
Total, worst case		129	809	475		
Sun reduction		0.59	0.59	0.61		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.63	0.61	0.61		
Total reduction		0.36	0.35	0.36		
Total, real		47	284	172		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H206 - H206

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	07:48 (74) 08:15 (74)	07:22 17:15	07:02 16:47
2	05:45 21:14	06:12 20:51	06:48 20:03	07:45 (74) 08:16 (74)	07:23 17:14	07:03 16:47
3	05:45 21:13	06:14 20:50	06:49 20:01	07:43 (74) 08:17 (74)	07:25 19:05	07:04 16:47
4	05:46 21:13	06:15 20:49	06:51 19:59	07:42 (74) 08:18 (74)	07:26 19:04	07:06 16:46
5	05:46 21:13	06:16 20:47	06:52 19:57	07:40 (74) 08:19 (74)	07:27 19:02	07:07 17:10
6	05:47 21:13	06:17 20:46	06:53 19:56	07:38 (74) 08:20 (74)	07:28 19:00	07:08 17:09
7	05:48 21:12	06:18 20:45	06:54 19:54	07:38 (74) 08:21 (74)	07:29 18:56	07:10 17:08
8	05:49 21:12	06:19 20:43	06:55 19:52	07:37 (74) 08:22 (74)	07:31 18:54	07:11 17:06
9	05:49 21:12	06:20 20:42	06:56 19:50	07:36 (74) 08:22 (74)	07:32 18:53	07:12 17:05
10	05:50 21:11	06:22 20:40	06:58 19:48	07:35 (74) 08:22 (74)	07:33 18:51	07:14 17:04
11	05:51 21:11	06:23 20:39	06:59 19:46	07:34 (74) 08:22 (74)	07:34 18:49	07:15 17:03
12	05:52 21:10	06:24 20:38	07:00 19:45	07:33 (74) 08:22 (74)	07:36 18:47	07:17 17:02
13	05:52 21:10	06:25 20:36	07:01 19:43	07:33 (74) 08:21 (74)	07:37 18:46	07:18 17:01
14	05:53 21:09	06:26 20:35	07:02 19:41	07:32 (74) 08:21 (74)	07:38 18:44	07:19 17:00
15	05:54 21:08	06:27 20:33	07:03 19:39	07:32 (74) 08:22 (74)	07:39 18:42	07:21 16:59
16	05:55 21:08	06:28 20:32	07:04 19:37	07:32 (74) 08:21 (74)	07:41 18:40	07:22 16:58
17	05:56 21:07	06:30 20:30	07:06 19:35	07:32 (74) 08:20 (74)	07:42 18:39	07:23 16:57
18	05:57 21:06	06:31 20:28	07:07 19:33	07:32 (74) 08:20 (74)	07:43 18:37	07:24 16:56
19	05:58 21:05	06:32 20:27	07:08 19:32	07:31 (74) 08:19 (74)	07:45 18:35	07:26 16:55
20	05:59 21:05	06:33 20:25	07:09 19:30	07:31 (74) 08:18 (74)	07:46 18:34	07:27 16:54
21	06:00 21:04	06:34 20:24	07:10 19:28	07:32 (74) 08:17 (74)	07:47 18:32	07:28 16:53
22	06:01 21:03	06:35 20:22	07:11 19:26	07:33 (74) 08:16 (74)	07:48 18:31	07:30 16:52
23	06:02 21:02	06:37 20:20	07:13 19:24	07:34 (74) 08:15 (74)	07:50 18:29	07:31 16:51
24	06:03 21:01	06:38 20:19	07:14 19:22	07:35 (74) 08:13 (74)	07:51 18:27	07:32 16:51
25	06:04 21:00	06:39 20:17	07:15 19:20	07:36 (74) 08:11 (74)	07:52 18:26	07:33 16:50
26	06:05 20:59	06:40 20:15	07:16 19:18	07:37 (74) 08:09 (74)	07:54 18:24	07:35 16:50
27	06:06 20:58	06:41 20:13	07:17 19:17	07:38 (74) 08:07 (74)	07:55 18:23	07:36 16:49
28	06:07 20:57	06:42 20:12	07:19 19:15	07:40 (74) 08:05 (74)	07:56 18:21	07:37 16:49
29	06:08 20:56	06:44 20:10	07:20 19:13	07:42 (74) 08:02 (74)	07:58 18:20	07:38 16:48
30	06:09 20:55	06:45 20:08	07:21 19:11	07:46 (74) 07:57 (74)	07:59 18:18	07:39 16:48
31	06:10 20:54	06:46 20:06	07:50 (74) 08:13 (74)		08:00 18:17	08:01 16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case		39	1193	204		
Sun reduction		0.74	0.69	0.63		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.61	0.61	0.63		
Total reduction		0.44	0.41	0.39		
Total, real		17	488	79		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H207 - H207

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:33	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:12	21:05	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:10	07:47	07:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:48	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H208 - H208

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:01	21:14	20:52	20:05	19:09	17:16	16:47
2	08:02	07:43	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H209 - H209

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:54	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H210 - H210

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H211 - H211

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H212 - H212

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H213 - H213

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H214 - H214

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H215 - H215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:23	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H217 - H217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H220 - H220

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:33	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:00	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H221 - H221

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H222 - H222

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	19:26 (66)	05:44	06:11	19:34 (66)	06:47	07:22	07:02
	16:56	17:34	18:11	19:51	20:28	38 20:04 (66)	21:01	20:52	43 20:17 (66)	20:05	19:09	17:15
2	08:02	07:43	07:02	07:06	06:15	19:25 (66)	05:44	06:12	19:34 (66)	06:48	07:23	07:03
	16:57	17:35	18:12	19:52	20:29	40 20:05 (66)	21:02	20:51	43 20:17 (66)	20:03	19:07	17:14
3	08:02	07:42	07:00	07:04	06:14	19:25 (66)	05:43	06:14	19:34 (66)	06:49	07:25	07:04
	16:58	17:36	18:14	19:53	20:30	41 20:06 (66)	21:03	20:50	43 20:17 (66)	20:01	19:05	17:13
4	08:02	07:41	06:59	07:02	06:13	19:25 (66)	05:43	06:15	19:34 (66)	06:51	07:26	07:06
	16:59	17:38	18:15	19:54	20:31	42 20:07 (66)	21:04	20:49	43 20:17 (66)	19:59	19:04	17:11
5	08:02	07:40	06:57	07:00	06:11	19:24 (66)	05:42	06:16	19:34 (66)	06:52	07:27	07:07
	17:00	17:39	18:16	19:56	20:32	42 20:06 (66)	21:05	20:47	43 20:17 (66)	19:58	19:02	17:10
6	08:02	07:39	06:55	06:59	06:10	19:24 (66)	05:42	06:17	19:34 (66)	06:53	07:28	07:08
	17:01	17:41	18:18	19:57	20:34	43 20:07 (66)	21:05	20:46	43 20:16 (66)	19:56	19:00	17:09
7	08:01	07:37	06:53	06:57	06:08	19:24 (66)	05:41	06:18	19:33 (66)	06:54	07:30	07:10
	17:02	17:42	18:19	19:58	20:35	43 20:07 (66)	21:06	20:45	43 20:16 (66)	19:54	18:56	17:08
8	08:01	07:36	07:52	06:55	06:07	19:24 (66)	05:41	06:19	19:33 (66)	06:55	07:31	07:11
	17:03	17:44	18:20	19:59	20:36	43 20:07 (66)	21:07	20:43	43 20:16 (66)	19:52	18:54	17:06
9	08:01	07:35	07:50	06:53	06:06	19:23 (66)	05:41	06:20	19:33 (66)	06:56	07:32	07:13
	17:04	17:45	19:22	20:00	20:37	43 20:06 (66)	21:08	20:42	42 20:15 (66)	19:50	18:53	17:05
10	08:01	07:33	07:48	06:51	06:05	19:23 (66)	05:40	06:21	19:34 (66)	06:58	07:33	07:14
	17:05	17:46	19:23	20:02	20:38	43 20:06 (66)	21:08	20:41	41 20:15 (66)	19:48	18:51	17:04
11	08:00	07:32	07:46	06:50	06:03	19:24 (66)	05:40	06:23	19:35 (66)	06:59	07:34	07:15
	17:06	17:48	19:24	20:03	20:40	42 20:06 (66)	21:09	20:40	39 20:14 (66)	19:46	18:49	17:03
12	08:00	07:31	07:44	06:48	06:02	19:24 (66)	05:40	06:24	19:35 (66)	07:00	07:36	07:17
	17:07	17:49	19:25	20:04	20:41	42 20:06 (66)	21:09	20:41	38 20:13 (66)	19:45	18:47	17:02
13	08:00	07:29	07:43	06:46	06:01	19:24 (66)	05:40	06:25	19:35 (66)	07:01	07:37	07:18
	17:08	17:51	19:27	20:05	20:42	42 20:06 (66)	21:10	20:42	36 20:11 (66)	19:43	18:46	17:01
14	07:59	07:28	07:41	06:44	06:00	19:25 (66)	05:40	06:26	19:36 (66)	07:02	07:38	07:19
	17:10	17:52	19:28	20:07	20:43	41 20:06 (66)	21:10	20:43	33 20:09 (66)	19:41	18:44	17:00
15	07:59	07:26	07:39	06:43	05:59	19:25 (66)	05:40	06:27	19:37 (66)	07:03	07:39	07:21
	17:11	17:53	19:29	20:08	20:44	41 20:06 (66)	21:11	20:44	31 20:08 (66)	19:39	18:42	16:59
16	07:58	07:25	07:37	06:41	05:58	19:25 (66)	05:40	06:28	19:37 (66)	07:04	07:41	07:22
	17:12	17:55	19:31	20:09	20:45	40 20:05 (66)	21:11	20:45	29 20:06 (66)	19:37	18:40	16:58
17	07:58	07:23	07:35	06:39	05:56	19:26 (66)	05:40	06:30	19:38 (66)	07:06	07:42	07:23
	17:13	17:56	19:32	20:10	20:46	39 20:05 (66)	21:12	20:46	27 20:09 (66)	19:35	18:39	16:57
18	07:57	07:22	07:33	06:37	05:55	19:26 (66)	05:40	06:31	19:40 (66)	07:07	07:43	07:25
	17:15	17:57	19:33	20:12	20:47	39 20:05 (66)	21:12	20:47	23 20:03 (66)	19:33	18:37	16:56
19	07:56	07:20	07:32	06:36	05:54	19:27 (66)	05:40	06:32	19:41 (66)	07:08	07:45	07:26
	17:16	17:59	19:34	20:13	20:49	37 20:04 (66)	21:13	20:48	20 20:11 (66)	19:32	18:35	16:55
20	07:56	07:19	07:30	06:34	05:53	19:27 (66)	05:40	06:33	19:43 (66)	07:09	07:46	07:27
	17:17	18:00	19:36	20:14	20:50	37 20:04 (66)	21:13	20:49	17 20:00 (66)	19:30	18:34	16:54
21	07:55	07:17	07:28	06:32	05:52	19:28 (66)	05:40	06:34	19:44 (66)	07:10	07:47	07:28
	17:19	18:00	19:37	20:15	20:51	35 20:03 (66)	21:13	20:50	9 19:57 (66)	19:28	18:32	16:53
22	07:54	07:15	07:26	06:31	05:51	19:29 (66)	05:41	06:35	06:01	07:12	07:48	07:30
	17:20	18:02	19:38	20:17	20:52	33 20:02 (66)	21:13	20:51	34 20:13 (66)	20:22	19:26	18:31
23	07:53	07:14	07:24	06:29	05:51	19:29 (66)	05:41	06:36	06:02	07:13	07:50	07:31
	17:21	18:03	19:39	20:18	20:53	32 20:01 (66)	21:14	20:52	36 20:13 (66)	20:20	19:24	18:29
24	07:52	07:12	07:22	06:28	05:50	19:30 (66)	05:41	06:37	06:03	07:14	07:51	07:32
	17:23	18:04	19:41	20:19	20:54	31 20:01 (66)	21:14	20:53	36 20:13 (66)	20:19	19:22	18:27
25	07:52	07:11	07:21	06:26	05:49	19:31 (66)	05:41	06:38	06:04	07:15	07:52	07:34
	17:24	18:06	19:42	20:20	20:55	30 20:01 (66)	21:14	20:54	38 20:14 (66)	20:17	19:20	18:26
26	07:51	07:09	07:19	06:24	05:48	19:32 (66)	05:42	06:39	06:05	07:16	07:54	07:35
	17:25	18:07	19:43	20:21	20:56	28 20:00 (66)	21:14	20:55	38 20:14 (66)	20:15	19:18	18:24
27	07:50	07:07	07:17	06:23	05:47	19:33 (66)	05:42	06:40	06:06	07:17	07:55	07:36
	17:27	18:08	19:44	20:23	20:57	25 19:58 (66)	21:14	20:56	40 20:15 (66)	20:13	19:17	18:23
28	07:49	07:06	07:15	06:21	05:47	19:34 (66)	05:42	06:41	06:07	07:19	07:56	07:37
	17:28	18:10	19:46	20:24	20:58	24 19:58 (66)	21:14	20:57	40 20:15 (66)	20:12	19:15	18:21
29	07:48	07:13	06:20	06:19	05:46	19:35 (66)	05:43	06:42	06:08	07:20	07:58	07:38
	17:29	18:11	19:47	20:25	20:59	22 19:57 (66)	21:14	20:58	41 20:16 (66)	20:10	19:13	18:20
30	07:47	07:11	06:18	06:17	05:45	19:36 (66)	05:44	06:43	06:09	07:21	07:59	07:40
	17:31	19:48	20:26	20:03 (66)	21:00	20 19:56 (66)	21:14	20:59	42 20:17 (66)	20:08	19:11	18:18
31	07:46	07:09	06:15	06:14	05:45	19:38 (66)	05:44	06:44	06:10	07:22	08:00	08:02
	17:32	19:49	21:01	21:01	21:01	17 19:55 (66)	21:15	20:54	42 20:17 (66)	20:06	18:17	16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case				233	1115	27	660	729				
Sun reduction				0.61	0.65	0.70	0.76	0.74				
Oper. time red.				0.98	0.98	0.98	0.98	0.98				
Wind dir. red.				0.63	0.63	0.63	0.63	0.63				
Total reduction				0.37	0.40	0.43	0.46	0.45				
Total, real				87	443	12	307	330				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H224 - H224

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	07:45	07:04	07:26 (68)	07:08	07:32 (67)	06:17	05:44	05:44	06:11	06:47	07:02	07:41		
	16:56	17:34	18:11	24 07:50 (68)	19:51	19 07:51 (67)	20:28	21:01	21:14	20:52	20:05	19:09	17:15	16:47	
2	08:02	07:43	07:02	07:26 (68)	07:06	07:32 (67)	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42	
	16:57	17:35	18:12	25 07:51 (68)	19:52	18 07:50 (67)	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:26 (68)	07:04	07:33 (67)	06:14	05:43	05:45	06:14	06:49	07:25	07:04	07:43	
	16:58	17:36	18:14	24 07:50 (68)	19:53	15 07:48 (67)	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47	
4	08:02	07:41	06:59	07:26 (68)	07:02	07:34 (67)	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44	
	16:59	17:38	18:15	23 07:49 (68)	19:54	12 07:46 (67)	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46	
5	08:02	07:40	06:57	07:26 (68)	07:00	07:36 (67)	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	
	17:00	17:39	18:16	22 07:48 (68)	19:56	6 07:42 (67)	20:32	21:05	21:13	20:47	19:57	19:02	11 08:08 (68)	17:10	16:46
6	08:02	07:39	06:55	07:28 (68)	06:59	06:10	05:42	05:47	06:17	06:53	07:28	08:05 (68)	07:08	07:46	
	17:01	17:41	18:18	20 07:48 (68)	19:57	20:34	21:05	21:13	20:46	19:56	19:00	16 08:21 (68)	17:09	16:46	
7	08:01	07:37	06:53	07:28 (68)	06:57	06:08	05:41	05:48	06:18	06:54	07:29	08:04 (68)	07:10	07:47	
	17:02	17:42	18:19	18 07:46 (68)	19:58	20:35	21:06	21:12	20:45	19:54	5 07:33 (67)	17:08	16:46	16:46	
8	08:01	07:36	07:52	08:30 (68)	06:55	06:07	05:41	05:48	06:19	06:55	07:29 (67)	07:31	08:02 (68)	17:11	07:48
	17:03	17:44	18:20	14 08:44 (68)	19:59	20:36	21:07	21:12	20:43	19:52	12 07:41 (67)	18:54	19 08:23 (68)	17:08	16:46
9	08:01	07:35	07:50	08:33 (68)	06:53	06:06	05:41	05:49	06:20	06:56	07:27 (67)	07:32	08:04 (68)	17:13	07:49
	17:04	17:45	19:22	7 08:40 (68)	20:00	20:37	21:08	21:12	20:42	19:50	15 07:42 (67)	18:53	23 08:24 (68)	17:05	16:46
10	08:01	07:33	07:48	06:51	06:51	06:05	05:41	05:50	06:21	06:58	07:25 (67)	07:33	08:00 (68)	17:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18 07:43 (67)	18:51	24 08:24 (68)	17:04	16:45	16:45
11	08:00	07:32	07:46	06:50	06:50	06:03	05:40	05:51	06:23	06:59	07:24 (67)	07:34	08:00 (68)	17:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	19 07:43 (67)	18:49	25 08:25 (68)	17:03	16:46	16:46
12	08:00	07:31	07:44	06:48	06:48	06:02	05:40	05:52	06:24	07:00	07:23 (67)	07:36	07:59 (68)	17:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	20 07:43 (67)	18:47	25 08:24 (68)	17:02	16:46	16:46
13	08:00	07:29	07:43	06:46	06:46	06:01	05:40	05:52	06:25	07:01	07:22 (67)	07:37	07:59 (68)	17:18	07:53
	17:08	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	21 07:43 (67)	18:46	25 08:24 (68)	17:01	16:46	16:46
14	07:59	07:28	07:41	06:44	06:40	06:00	05:40	05:53	06:26	07:02	07:23 (67)	07:38	08:00 (68)	17:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	20 07:43 (67)	18:44	24 08:24 (68)	17:00	16:46	16:46
15	07:59	07:26	07:39	06:43	06:43	05:59	05:40	05:54	06:27	07:03	07:25 (67)	07:39	08:01 (68)	17:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18 07:43 (67)	18:42	22 08:23 (68)	16:59	16:46	16:46
16	07:58	07:25	07:37	06:41	06:41	05:57	05:40	05:55	06:28	07:04	07:26 (67)	07:41	08:02 (68)	17:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	16 07:42 (67)	18:40	20 08:22 (68)	16:58	16:46	16:46
17	07:58	07:23	07:35	06:39	06:39	05:56	05:40	05:56	06:30	07:06	07:27 (67)	07:42	08:04 (68)	17:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	14 07:41 (67)	18:39	17 08:21 (68)	16:57	16:47	16:47
18	07:57	07:22	07:33	06:37	06:37	05:55	05:40	05:57	06:31	07:07	07:28 (67)	07:43	08:05 (68)	17:25	07:56
	17:15	17:57	19:33	20:12	20:47	21:12	21:06	20:28	19:33	11 07:39 (67)	18:37	14 08:19 (68)	16:56	16:47	16:47
19	07:56	07:20	07:32	06:36	06:36	05:54	05:40	05:58	06:32	07:08	07:29 (67)	07:45	08:06 (68)	17:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:12	21:05	20:27	19:32	8 07:37 (67)	18:35	11 08:17 (68)	16:55	16:47	16:47
20	07:56	07:19	07:30	06:34	06:34	05:53	05:40	05:59	06:33	07:09	07:30 (67)	07:46	08:08 (68)	17:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	4 07:34 (67)	18:34	7 08:15 (68)	16:54	16:48	16:48
21	07:55	07:17	07:28	06:32	06:32	05:52	05:40	06:00	06:34	07:10	07:47	08:02	08:08	17:28	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	18:32	16:53	16:48	16:48	16:48
22	07:54	07:15	07:26	06:31	06:31	05:51	05:41	06:01	06:35	07:11	07:48	08:03	08:09	17:30	07:59
	17:20	18:02	8 07:36 (68)	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49	16:49	16:49
23	07:53	07:14	07:35 (68)	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	08:07	08:13	17:31	07:59
	17:21	18:03	12 07:47 (68)	19:39	3 07:47 (67)	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16:49	16:49
24	07:52	07:12	07:33 (68)	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	08:08	08:14	17:32	08:00
	17:23	18:04	15 07:48 (68)	19:41	7 07:49 (67)	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50	16:50
25	07:52	07:11	07:31 (68)	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	08:09	08:15	17:33	08:00
	17:24	18:06	18 07:49 (68)	19:42	11 07:52 (67)	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	16:50
26	07:51	07:09	07:30 (68)	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	08:11	08:17	17:35	08:00
	17:25	18:07	20 07:50 (68)	19:43	13 07:52 (67)	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51	16:51
27	07:50	07:07	07:28 (68)	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	08:12	08:18	17:36	08:01
	17:27	18:08	23 07:51 (68)	19:44	16 07:53 (67)	20:23	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:52	16:52
28	07:49	07:06	07:26 (68)	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	08:13	08:19	17:37	08:01
	17:28	18:10	25 07:51 (68)	19:46	18 07:53 (67)	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52	16:52
29	07:48	07:05	07:33 (67)	06:20	06:20	05:46	05:43	06:08	06:44	07:20	07:58	08:15	08:21	17:38	08:01
	17:29	18:11	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	17:29	16:48	16:48	16:53	16:53
30	07:47	07:04	07:11	07:31 (67)	06:18	05:45	05:44	06:09	06:45	07:21	07:59	08:16	08:22	17:40	08:01
	17:31	18:13	19:48	21 07:52 (67)	20:26	21:00	21:14	20:55	20:08	19:11	18:18	17:25	16:48	16:54	16:54
31	07:46	07:03	07:09	07:31 (67)	06:17	05:45	05:45	06:10	06:46	07:22	08:00	08:17	08:23	17:41	08:01
	17:32	18:14	19:49	20 07:51 (67)	20:27	21:01	21:15	20:54	20:06	19:11	18:17	17:24	16:48	16:55	16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	276	276	276
Total, worst case		121		305		70				201		305			
Sun reduction		0.59		0.59		0.61				0.69		0.63			
Oper. time red.		0.98		0.98		0.98				0.98		0.98			
Wind dir. red.		0.63		0.61		0.59				0.59		0.63			
Total reduction		0.36		0.35		0.35				0.40		0.39			
Total, real		44		108		25				80		118			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H225 - H225

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	15:53 (70)	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	15:48 (70)	
	16:56	29 16:27 (69)	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47	21 16:21 (69)	
2	08:02	15:54 (70)	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	15:46 (70)	
	16:57	29 16:28 (69)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	24 16:20 (69)	
3	08:02	15:55 (70)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43	15:45 (70)	
	16:58	29 16:29 (69)	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:46	26 16:19 (69)	
4	08:02	15:56 (70)	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44	15:44 (70)	
	16:58	30 16:31 (69)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46	28 16:19 (69)	
5	08:02	15:57 (70)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	15:43 (70)	
	16:59	30 16:32 (69)	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46	28 16:18 (69)	
6	08:01	15:57 (70)	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46	15:43 (70)	
	17:00	29 16:32 (69)	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46	29 16:18 (69)	
7	08:01	15:58 (70)	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47	15:43 (70)	
	17:02	28 16:33 (69)	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46	29 16:18 (69)	
8	08:01	16:00 (70)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	15:43 (70)	
	17:03	28 16:35 (69)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45	30 16:18 (69)	
9	08:01	16:01 (70)	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49	15:43 (70)	
	17:04	27 16:36 (69)	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:45	30 16:18 (69)	
10	08:01	16:02 (70)	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50	15:43 (70)	
	17:05	25 16:37 (69)	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45	30 16:18 (69)	
11	08:00	16:05 (70)	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:59	07:34	07:15	07:51	15:43 (70)	
	17:06	21 16:38 (69)	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:45	30 16:18 (69)	
12	08:00	16:23 (69)	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:16	07:52	15:44 (70)	
	17:07	16 16:39 (69)	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:02	16:45	30 16:18 (69)	
13	07:59	16:24 (69)	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52	15:44 (70)	
	17:08	17 16:41 (69)	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:00	16:46	30 16:18 (69)	
14	07:59	16:25 (69)	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53	15:44 (70)	
	17:10	16 16:41 (69)	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46	30 16:18 (69)	
15	07:59	16:26 (69)	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54	15:45 (70)	
	17:11	15 16:41 (69)	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46	29 16:19 (69)	
16	07:58	16:27 (69)	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55	15:45 (70)	
	17:12	14 16:41 (69)	17:55	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46	28 16:18 (69)	
17	07:57	16:27 (69)	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56	15:45 (70)	
	17:13	13 16:40 (69)	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46	30 16:19 (69)	
18	07:57	16:29 (69)	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56	15:46 (70)	
	17:15	11 16:40 (69)	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47	29 16:19 (69)	
19	07:56	16:31 (69)	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57	15:46 (70)	
	17:16	8 16:39 (69)	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47	29 16:19 (69)	
20	07:55		07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57	15:47 (70)	
	17:17		18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:34	16:54	16:47	29 16:20 (69)	
21	07:55		07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58	15:47 (70)	
	17:18		18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48	29 16:20 (69)	
22	07:54		07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:30	07:58	15:48 (70)	
	17:20		18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48	29 16:21 (69)	
23	07:53		07:14	07:24	06:29	05:50	05:41	06:02	06:36	07:13	07:50	07:31	07:59	15:48 (70)	
	17:21		18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:52	8 16:16 (69)	16:49	29 16:21 (69)
24	07:52		07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	16:06 (69)	07:59	15:49 (70)
	17:22		18:04	19:41	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	11 16:17 (69)	16:50	29 16:22 (69)
25	07:51		07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	16:05 (69)	08:00	15:49 (70)
	17:24		18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	13 16:18 (69)	16:50	29 16:22 (69)
26	07:51		07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	16:06 (69)	08:00	15:49 (70)
	17:25		18:07	19:43	20:21	20:56	21:14	21:00	20:15	19:18	18:24	16:50	14 16:20 (69)	16:51	29 16:22 (69)
27	07:50		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	16:05 (69)	08:01	15:49 (70)
	17:27		18:08	19:44	20:23	20:57	21:14	21:00	20:13	19:16	18:23	16:49	15 16:20 (69)	16:51	29 16:23 (69)
28	07:49		07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	16:05 (69)	08:01	15:51 (70)
	17:28		18:10	19:45	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16 16:21 (69)	16:52	28 16:24 (69)
29	07:48		07:13	07:20	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	16:04 (69)	08:01	15:51 (70)
	17:29		19:47	20:25	20:59	21:14	21:00	20:56	20:10	19:13	18:20	16:48	17 16:21 (69)	16:53	30 16:25 (69)
30	07:47		07:11	07:18	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:39	16:05 (69)	08:01	15:52 (70)
	17:31		19:48	20:26	21:00	21:14	21:00	20:55	20:08	19:11	18:18	16:48	16 16:21 (69)	16:54	30 16:26 (69)
31	07:46		07:09	07:19	06:25	05:45	05:40	06:10	06:46	07:22	08:00	07:40	08:01	15:52 (70)	
	17:32		19:49	20:27	21:00	21:14	21:00	20:53	20:06	19:09	18:17	16:48	16:55	30 16:26 (69)	
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	890		
Total, worst case	415										110		890		
Sun reduction	0.57										0.50		0.49		
Oper. time red.	0.98										0.98		0.98		
Wind dir. red.	0.56										0.56		0.55		
Total reduction	0.31										0.27		0.26		
Total, real	128										30		236		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H226 - H226

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	08:06 (71)	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	
	16:56	17:34	17:34	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	07:02
2	08:02	07:43	08:05 (71)	07:02	07:06	06:15	05:43	05:45	06:12	06:48	07:23	07:03
	16:57	17:35	19	08:24 (71)	18:12	19:52	20:29	21:02	21:14	20:03	19:07	17:14
3	08:02	07:42	08:04 (71)	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04
	16:58	17:36	20	08:24 (71)	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05
4	08:02	07:41	08:03 (71)	06:59	07:02	06:12	05:43	05:46	06:15	06:50	07:26	07:06
	16:59	17:38	22	08:25 (71)	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03
5	08:02	08:26 (72)	07:40	08:01 (71)	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27
	17:00	1	08:27 (72)	17:39	23	08:24 (71)	18:16	19:55	20:32	21:05	21:13	20:47
6	08:01	08:25 (72)	07:39	08:00 (71)	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28
	17:01	2	08:27 (72)	17:41	25	08:25 (71)	18:18	19:57	20:34	21:05	21:13	20:46
7	08:01	08:25 (72)	07:37	08:00 (71)	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29
	17:02	3	08:28 (72)	17:42	25	08:25 (71)	18:19	19:58	20:35	21:06	21:12	20:45
8	08:01	08:25 (72)	07:36	08:00 (71)	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31
	17:03	3	08:28 (72)	17:43	24	08:24 (71)	18:20	19:59	20:36	21:07	21:12	20:43
9	08:01	08:25 (72)	07:35	08:01 (71)	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32
	17:04	4	08:29 (72)	17:45	23	08:24 (71)	19:22	20:00	20:37	21:07	21:12	20:42
10	08:01	08:24 (72)	07:33	08:02 (71)	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33
	17:05	5	08:29 (72)	17:46	22	08:24 (71)	19:23	20:02	20:38	21:08	21:11	20:40
11	08:00	08:24 (72)	07:32	08:02 (71)	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34
	17:06	6	08:30 (72)	17:48	20	08:22 (71)	19:24	20:03	20:39	21:09	21:11	20:39
12	08:00	08:23 (72)	07:31	08:04 (71)	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36
	17:07	7	08:30 (72)	17:49	18	08:22 (71)	19:25	20:04	20:41	21:09	21:10	20:38
13	08:00	08:23 (72)	07:29	08:05 (71)	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37
	17:08	8	08:31 (72)	17:50	15	08:20 (71)	19:27	20:05	20:42	21:10	21:10	20:36
14	07:59	08:22 (72)	07:28	08:08 (71)	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38
	17:10	9	08:31 (72)	17:52	9	08:17 (71)	19:28	20:07	20:43	21:10	21:09	20:35
15	07:59	08:22 (72)	07:26		07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39
	17:11	10	08:32 (72)	17:53		19:29	20:08	20:44	21:11	21:08	20:33	19:39
16	07:58	08:21 (72)	07:25		07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41
	17:12	10	08:31 (72)	17:55		19:30	20:09	20:45	21:11	21:08	20:31	19:37
17	07:57	08:20 (72)	07:23		07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42
	17:13	11	08:31 (72)	17:56		19:32	20:10	20:46	21:12	21:07	20:30	19:35
18	07:57	08:20 (72)	07:22		07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43
	17:15	12	08:32 (72)	17:57		19:33	20:11	20:47	21:12	21:06	20:28	19:33
19	07:56	08:19 (72)	07:20		07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:44
	17:16	12	08:31 (72)	17:59		19:34	20:13	20:48	21:12	21:05	20:27	19:31
20	07:56	08:19 (72)	07:19		07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46
	17:17	11	08:30 (72)	18:00		19:36	20:14	20:50	21:13	21:05	20:25	19:30
21	07:55	08:20 (72)	07:17		07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47
	17:18	9	08:29 (72)	18:00		19:37	20:15	20:51	21:13	21:04	20:23	19:28
22	07:54	08:24 (72)	07:15		07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48
	17:20	4	08:28 (72)	18:02		19:38	20:16	20:52	21:13	21:03	20:22	19:26
23	07:53		07:14		07:24	06:29	05:51	05:41	06:02	06:36	07:13	07:50
	17:21		18:03		19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29
24	07:52		07:12		07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51
	17:23		18:04		19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27
25	07:52		07:10		07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52
	17:24		18:06		19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26
26	07:51	08:13 (71)	07:09		07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54
	17:25	1	08:14 (71)	18:07		19:43	20:21	20:56	21:14	20:59	20:15	19:18
27	07:50	08:12 (71)	07:07		07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55
	17:27	5	08:17 (71)	18:08		19:44	20:23	20:57	21:14	20:58	20:13	19:16
28	07:49	08:11 (71)	07:05		07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56
	17:28	8	08:19 (71)	18:10		19:46	20:24	20:58	21:14	20:57	20:12	19:15
29	07:48	08:10 (71)			07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58
	17:29	10	08:20 (71)		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20
30	07:47	08:09 (71)			07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59
	17:31	13	08:22 (71)		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18
31	07:46	08:07 (71)			07:09		05:45	05:45	06:10	06:46	08:00	08:32 (71)
	17:32	15	08:22 (71)		19:49		21:00		20:53	20:06	18:17	20
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case	179	282								65	372	26
Sun reduction	0.57	0.59								0.63	0.50	0.49
Oper. time red.	0.98	0.98								0.98	0.98	0.98
Wind dir. red.	0.69	0.67								0.67	0.68	0.69
Total reduction	0.38	0.39								0.42	0.33	0.33
Total, real	69	110								27	124	9

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H228 - H228

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H230 - H230

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:50
	17:05	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:38	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H233 - H233

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:57	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:45
9	08:00	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:31	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:31	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	07:59	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:42	21:10	21:08	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:06	20:29	19:35	18:38	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:07	07:44	07:25	07:56
	17:16	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:30	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	07:59
	17:24	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:35	08:00
	17:26	18:08	19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H248 - H248

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:13	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:50
	17:06	17:47	19:24	20:02	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:36	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:21	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:21	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:13	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H249 - H249

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:47
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:47 21:12	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:18 20:44	06:54 19:54	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:34 17:45	07:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	07:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:47	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	07:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:09	06:25 20:36	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:52	07:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:41	07:38 18:44	07:19 16:59	07:53 16:45
15	07:58 17:11	07:26 17:53	07:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	07:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46	05:40 21:11	05:56 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:16	07:20 17:58	07:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:32 20:26	07:08 19:31	07:44 18:35	07:26 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:46 18:33	07:27 16:54	07:57 16:47
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:01	07:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:03	07:24 19:39	06:29 20:17	05:50 20:53	05:41 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:29	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	05:49 20:54	05:41 21:13	06:02 21:01	06:37 20:18	07:14 19:22	07:51 18:27	07:32 16:51	07:59 16:49
25	07:51 17:24	07:10 18:05	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:25	07:33 16:50	08:00 16:50
26	07:50 17:25	07:09 18:07	07:18 19:43	06:24 20:21	05:48 20:56	05:41 21:14	06:04 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:51
27	07:49 17:26	07:07 18:08	07:16 19:44	06:23 20:22	05:47 20:57	05:42 21:14	06:05 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:36 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	07:15 19:45	06:21 20:24	05:46 20:57	05:42 21:14	06:07 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:47	07:13 19:47	06:19 20:25	05:46 20:58	05:43 21:14	06:08 20:56	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:53
30	07:46 17:30	07:03 19:48	07:11 19:48	06:18 20:26	05:45 20:59	05:43 21:14	06:09 20:54	06:44 20:08	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:53
31	07:45 17:32	07:02 19:49	07:09 19:49	05:44 21:00	05:44 21:00	06:10 20:53	06:46 20:06	08:00 18:16	08:00 18:16	08:00 18:16	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H250 - H250

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:05	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:08	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:57	06:30	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:47	16:54
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H251 - H251

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December							
1	08:02	07:44	07:04	07:07	06:17	19:33 (63)	05:44	05:44	06:11	19:42 (63)	06:47	19:26 (62)	07:22	07:02	07:41				
	16:56	17:33	18:11	19:50	20:27	20:04 (63)	21:01	21:14	20:52	44	20:26 (60)	20:05	14	19:40 (62)	19:09	17:15	16:47		
2	08:02	07:43	07:02	07:06	06:15	19:32 (63)	05:43	05:44	06:12	19:42 (63)	06:48	19:26 (62)	07:23	07:03	07:42				
	16:57	17:35	18:12	19:52	20:29	20:04 (63)	21:02	21:14	20:51	43	20:25 (60)	20:03	12	19:38 (62)	19:07	17:14	16:47		
3	08:02	07:42	07:00	07:04	06:14	19:32 (63)	05:43	05:45	06:13	19:42 (63)	06:49	19:27 (62)	07:24	07:04	07:43				
	16:57	17:36	18:14	19:53	20:30	20:05 (63)	21:03	21:13	20:50	42	20:24 (60)	20:01	9	19:36 (62)	19:05	17:13	16:46		
4	08:02	07:41	06:58	07:02	06:12	19:32 (63)	05:42	05:46	06:14	19:41 (63)	06:50	19:28 (62)	07:26	07:06	07:44				
	16:58	17:38	18:15	19:54	20:31	20:08 (60)	21:04	21:13	20:48	42	20:23 (60)	19:59	6	19:34 (62)	19:03	17:11	16:46		
5	08:02	07:40	06:57	07:00	06:11	19:31 (63)	05:42	05:46	06:16	19:41 (63)	06:52	19:31 (62)	07:27	07:07	07:45				
	16:59	17:39	18:16	19:55	20:32	20:08 (60)	21:05	21:13	20:47	41	20:22 (60)	19:57	2	19:32 (62)	19:02	17:10	16:46		
6	08:01	07:38	06:55	06:58	06:10	19:31 (63)	05:42	05:47	06:17	19:41 (63)	06:53	19:00	07:28	07:08	07:46				
	17:00	17:40	18:17	19:57	20:33	20:10 (60)	21:05	21:13	20:46	39	20:20 (60)	19:56	19:00	17:09	16:46				
7	08:01	07:37	06:53	06:57	19:35 (62)	06:08	19:31 (63)	05:41	06:18	19:41 (63)	06:54	19:00	07:29	07:10	07:47				
	17:01	17:42	18:19	19:58	1	19:36 (62)	20:35	40	20:11 (60)	21:06	21:12	20:45	38	20:19 (60)	19:54	18:56	17:07	16:45	
8	08:01	07:36	07:51	06:55	19:31 (62)	06:07	19:31 (63)	05:41	06:19	19:41 (63)	06:55	19:00	07:31	07:11	07:48				
	17:03	17:43	18:20	19:59	6	19:37 (62)	20:36	40	20:11 (60)	21:07	21:12	20:43	36	20:17 (60)	19:52	18:54	17:06	16:45	
9	08:01	07:35	07:50	06:53	19:29 (62)	06:06	19:31 (63)	05:41	06:20	19:41 (63)	06:56	19:00	07:32	07:12	07:49				
	17:04	17:45	18:21	20:00	9	19:38 (62)	20:37	42	20:13 (60)	21:07	21:11	20:42	35	20:16 (60)	19:50	18:52	17:05	16:45	
10	08:01	07:33	07:48	06:51	19:27 (62)	06:04	19:31 (63)	05:40	06:21	19:41 (63)	06:57	19:00	07:33	07:14	07:50				
	17:05	17:46	18:23	20:02	12	19:39 (62)	20:38	43	20:14 (60)	21:08	21:11	20:40	32	20:13 (63)	19:48	18:51	17:04	16:45	
11	08:00	07:32	07:46	06:49	19:27 (62)	06:03	19:32 (63)	05:40	06:22	19:41 (63)	06:58	19:00	07:34	07:15	07:51				
	17:06	17:48	18:24	20:03	14	19:41 (62)	20:39	43	20:15 (60)	21:09	21:11	20:39	32	20:13 (63)	19:46	18:49	17:03	16:45	
12	08:00	07:30	07:44	06:48	19:26 (62)	06:02	19:32 (63)	05:40	06:24	19:41 (63)	07:00	19:00	07:36	07:16	07:52				
	17:07	17:49	18:25	20:04	16	19:42 (62)	20:41	45	20:17 (60)	21:09	21:10	20:37	31	20:12 (63)	19:44	18:47	17:01	16:45	
13	07:59	07:29	07:42	06:46	19:25 (62)	06:01	19:33 (63)	05:40	06:25	19:43 (63)	07:01	19:00	07:37	07:18	07:52				
	17:08	17:50	18:27	20:05	18	19:43 (62)	20:42	44	20:17 (60)	21:10	21:09	20:36	28	20:11 (63)	19:43	18:45	17:00	16:45	
14	07:59	07:28	07:41	06:44	19:24 (62)	06:00	19:32 (63)	05:40	06:26	19:43 (63)	07:02	19:00	07:38	07:19	07:53				
	17:09	17:52	18:28	20:06	20	19:44 (62)	20:43	41	20:15 (60)	21:10	21:09	20:34	27	20:10 (63)	19:41	18:44	16:59	16:46	
15	07:58	07:26	07:39	06:42	19:25 (62)	05:58	19:33 (63)	05:40	06:27	19:44 (63)	07:03	19:00	07:39	07:20	07:54				
	17:11	17:53	18:29	20:08	21	19:46 (62)	20:48	38	20:14 (60)	21:11	21:08	20:33	24	20:08 (63)	19:39	18:42	16:58	16:46	
16	07:58	07:25	07:37	06:41	19:24 (62)	05:57	19:34 (63)	05:40	06:28	19:45 (63)	07:04	19:00	07:41	07:22	07:55				
	17:12	17:55	18:30	20:09	22	19:46 (62)	20:45	32	20:12 (60)	21:11	21:08	20:31	21	20:06 (63)	19:37	18:40	16:57	16:46	
17	07:57	07:23	07:35	06:39	19:24 (62)	05:56	19:35 (63)	05:40	06:29	19:46 (63)	07:05	19:00	07:42	07:23	07:55				
	17:13	17:56	18:32	20:10	21	19:45 (62)	20:46	25	20:00 (63)	21:12	21:07	20:30	19	20:05 (63)	19:35	18:39	16:56	16:46	
18	07:57	07:22	07:33	06:37	19:25 (62)	05:55	19:35 (63)	05:40	06:31	19:48 (63)	07:07	19:00	07:43	07:24	07:56				
	17:14	17:57	18:33	20:11	19	19:44 (62)	20:47	25	20:00 (63)	21:12	21:06	20:28	15	20:03 (63)	19:33	18:37	16:55	16:47	
19	07:56	07:20	07:31	06:36	19:26 (62)	05:54	19:36 (63)	05:40	06:32	19:50 (63)	07:08	19:00	07:44	07:26	07:57				
	17:16	17:59	18:34	20:13	17	19:43 (62)	20:48	23	19:59 (63)	21:12	21:05	20:27	10	20:00 (63)	19:31	18:35	16:55	16:47	
20	07:55	07:18	07:30	06:34	19:27 (62)	05:53	19:38 (63)	05:40	06:33	19:54 (63)	06:33	19:00	07:46	07:27	07:57				
	17:17	18:00	18:35	20:14	14	19:41 (62)	20:50	20	19:58 (63)	21:13	21:04	7	20:01 (63)	20:25	19:29	18:34	16:54	16:47	
21	07:55	07:17	07:28	06:32	19:29 (62)	05:52	19:40 (63)	05:40	06:34	19:52 (63)	06:34	19:00	07:47	07:28	07:58				
	17:18	18:00	18:37	20:15	10	19:39 (62)	20:51	17	19:57 (63)	21:13	21:04	12	20:04 (63)	20:23	1	19:39 (62)	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	19:24 (62)	05:51	19:41 (63)	05:40	06:35	19:50 (63)	06:35	19:34 (62)	07:11	07:48	07:30	07:58			
	17:20	18:01	18:38	20:16	14	19:55 (63)	21:13	14	20:06 (63)	20:22	21:03	16	20:06 (63)	20:22	10	19:44 (62)	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	19:23 (62)	05:50	19:43 (63)	05:41	06:36	19:49 (63)	06:36	19:31 (62)	07:12	07:50	07:31	07:59			
	17:21	18:03	18:39	20:18	10	19:53 (63)	21:13	10	20:07 (63)	20:20	21:02	18	20:07 (63)	20:20	15	19:46 (62)	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	19:44 (63)	05:50	19:48 (63)	06:03	06:37	19:48 (63)	06:38	19:30 (62)	07:14	07:51	07:32	07:59			
	17:22	18:04	18:40	20:19	11	19:55 (63)	20:54	21:14	21:01	21	20:09 (63)	20:18	17	19:47 (62)	19:22	18:27	16:51	16:49	
25	07:51	07:10	07:20	06:26	19:40 (63)	05:49	19:40 (63)	05:41	06:39	19:47 (63)	06:39	19:28 (62)	07:15	07:52	07:33	08:00			
	17:24	18:05	18:42	20:20	17	19:57 (63)	20:55	21:14	21:00	23	20:10 (63)	20:17	19	19:47 (62)	19:20	18:26	16:50	16:50	
26	07:51	07:09	07:18	06:24	19:39 (63)	05:48	19:39 (63)	05:42	06:40	19:46 (63)	06:40	19:27 (62)	07:16	07:54	07:35	08:00			
	17:25	18:07	18:43	20:21	19	19:58 (63)	20:56	21:14	20:59	24	20:10 (63)	20:15	20	19:47 (62)	19:18	18:24	16:50	16:51	
27	07:50	07:07	07:17	06:23	19:37 (63)	05:47	19:37 (63)	05:42	06:41	19:45 (63)	06:41	19:26 (62)	07:17	07:55	07:36	08:00			
	17:26	18:08	18:44	20:22	22	19:59 (63)	20:57	21:14	20:58	26	20:11 (63)	20:13	22	19:48 (62)	19:16	18:23	16:49	16:51	
28	07:49	07:05	07:15	06:21	19:36 (63)	05:46	19:36 (63)	05:42	06:42	19:44 (63)	06:42	19:25 (62)	07:18	07:56	07:37	08:01			
	17:28	18:10	18:45	20:24	25	20:01 (63)	20:58	21:14	20:57	34	20:23 (60)	20:12	22	19:47 (62)	19:14	18:21	16:48	16:52	
29	07:48	07:13	07:23	06:20	19:34 (63)	05:46	19:34 (63)	05:43	06:43	19:43 (63)	06:43	19:25 (62)	07:20	07:58	07:38	08:01			
	17:29	18:11	18:47	20:25	27	20:01 (63)	20:59	21:14	20:56	40	20:25 (60)	20:10	20	19:45 (62)	19:13	18:20	16:48	16:53	
30	07:47	07:11	07:21	06:18	19:34 (63)	05:45	19:34 (63)	05:43	06:44	19:43 (63)	06:45	19:25 (62)	07:21	07:59	07:39	08:01			
	17:31	18:13	18:48	20:26	29	20:03 (63)	20:59	21:14	20:55	42	20:26 (60)	20:08	18	19:43 (62)	19:11	18:18	16:47	16:54	
31	07:45	07:09	07:19	06:25	19:33 (63)	05:44	19:33 (63)	05:40	06:45	19:42 (63)	06:46	19:26 (62)	07:20	08:00	08:01				
	17:32	18:14	18:49	20:27	21:00	20:03 (63)	20:54	21:10	20:53	45	20:27 (60)	20:06	16	19:42 (62)	19:10	18:17	16:47	16:54	
Potential sun hours	287	292	369																

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H252 - H252

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:41	18:18	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:03	16:45
12	08:00	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:00	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:07	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	16:47
20	07:55	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:01	06:35	07:11	07:48	07:30	07:58
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:02	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:10	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H253 - H253

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	08:26 (63)	07:44	07:04	07:08	07:29 (61)
	16:56	38 09:51 (60)	17:34	18:11	19:50	19 07:48 (61)
2	08:02	08:26 (63)	07:43	07:02	07:06	07:30 (61)
	16:57	38 09:51 (60)	17:35	18:12	19:52	16 07:46 (61)
3	08:02	08:26 (63)	07:42	07:00	07:04	07:31 (61)
	16:58	37 09:51 (60)	17:36	18:14	19:53	13 07:44 (61)
4	08:02	08:26 (63)	07:41	06:59	07:02	07:34 (61)
	16:58	37 09:51 (60)	17:38	18:15	19:54	6 07:40 (61)
5	08:02	08:26 (63)	07:40	06:57	07:00	06:11
	16:59	37 09:51 (60)	17:39	18:16	19:55	20:32
6	08:02	08:26 (63)	07:39	06:55	06:58	06:10
	17:00	35 09:50 (60)	17:41	18:18	19:57	20:34
7	08:01	08:25 (63)	07:37	06:53	06:57	06:08
	17:02	34 09:49 (60)	17:42	18:19	19:58	20:35
8	08:01	08:25 (63)	07:36	07:52	06:55	06:07
	17:03	33 09:49 (60)	17:43	18:20	19:59	20:36
9	08:01	08:25 (63)	07:35	07:50	06:53	06:06
	17:04	31 09:48 (60)	17:45	19:21	20:00	20:37
10	08:01	08:24 (63)	07:33	07:48	06:51	06:04
	17:05	29 09:46 (60)	17:46	19:23	20:02	20:38
11	08:00	08:24 (63)	07:32	07:46	06:49	06:03
	17:06	25 09:45 (60)	17:48	19:24	20:03	20:39
12	08:00	08:23 (63)	07:31	07:44	06:48	06:02
	17:07	18 09:41 (60)	17:49	19:25	20:04	20:41
13	08:00	08:23 (63)	07:29	07:43	06:46	06:01
	17:08	15 08:38 (63)	17:50	19:27	20:05	20:42
14	07:59	08:22 (63)	07:28	07:41	06:44	06:00
	17:10	16 08:38 (63)	17:52	19:28	20:07	20:43
15	07:59	08:22 (63)	07:26	07:39	06:42	05:58
	17:11	16 08:38 (63)	17:53	19:29	20:08	20:44
16	07:58	08:21 (63)	07:25	07:37	06:41	05:57
	17:12	17 08:38 (63)	17:55	19:30	20:09	20:45
17	07:57	08:22 (63)	07:23	07:35	06:39	05:56
	17:13	16 08:38 (63)	17:56	19:32	20:10	20:46
18	07:57	08:23 (63)	07:22	07:33	06:37	05:55
	17:15	15 08:38 (63)	17:57	19:33	20:12	20:47
19	07:56	08:24 (63)	07:20	07:32	06:36	05:54
	17:16	13 08:37 (63)	17:59	19:34	20:13	20:49
20	07:56	08:25 (63)	07:19	07:30	06:34	05:53
	17:17	11 08:36 (63)	18:00	19:36	20:14	20:50
21	07:55	08:26 (63)	07:17	07:28	06:32	05:52
	17:18	8 08:34 (63)	18:00	19:37	20:15	20:51
22	07:54		07:15	07:26	06:31	05:51
	17:20		18:01	19:38	2 07:48 (61)	20:52
23	07:53		07:14	07:24	06:29	05:50
	17:21		18:03	19:39	5 07:49 (61)	20:53
24	07:52		07:12	07:22	06:27	05:50
	17:22		18:04	19:41	8 07:50 (61)	20:54
25	07:52		07:10	07:20	06:26	05:49
	17:24		18:06	19:42	10 07:51 (61)	20:55
26	07:51		07:09	07:19	06:24	05:48
	17:25		18:07	19:43	12 07:51 (61)	20:56
27	07:50		07:07	07:17	06:23	05:47
	17:27		18:08	19:44	14 07:51 (61)	20:57
28	07:49		07:05	07:15	06:21	05:46
	17:28		18:10	19:46	16 07:51 (61)	20:58
29	07:48			07:13	06:20	05:46
	17:29			19:47	17 07:50 (61)	20:59
30	07:47			07:11	06:18	05:45
	17:31			19:48	18 07:49 (61)	21:00
31	07:46			07:09	07:29 (61)	05:45
	17:32			19:49	19 07:48 (61)	21:01
Potential sun hours	287	292	369	403	458	464
Total, worst case	519		121	54		
Sun reduction	0.57		0.59	0.61		
Oper. time red.	0.98		0.98	0.98		
Wind dir. red.	0.70		0.59	0.59		
Total reduction	0.40		0.34	0.35		
Total, real	205		42	19		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H253 - H253

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:11	06:47	07:22	07:02	07:41	08:06 (63)	
	21:14	20:52	20:05	19:09	17:15	16:47	26 09:27 (60)	
2	05:44	06:12	06:48	07:23	07:03	07:42	08:07 (63)	
	21:14	20:51	20:03	19:07	17:14	16:47	29 09:29 (60)	
3	05:45	06:13	06:49	07:25	07:04	07:43	08:08 (63)	
	21:13	20:50	20:01	19:05	17:13	16:46	31 09:31 (60)	
4	05:46	06:14	06:50	07:26	07:06	07:44	08:09 (63)	
	21:13	20:49	19:59	19:03	17:11	16:46	33 09:33 (60)	
5	05:46	06:16	06:52	07:27	07:07	07:45	08:10 (63)	
	21:13	20:47	19:57	19:02	17:10	16:46	34 09:34 (60)	
6	05:47	06:17	06:53	07:28	07:08	07:46	08:11 (63)	
	21:13	20:46	19:56	19:00	17:09	16:46	35 09:35 (60)	
7	05:48	06:18	06:54	07:29	07:10	07:47	08:13 (63)	
	21:12	20:45	19:54	18:56	17:07	16:46	37 09:38 (60)	
8	05:48	06:19	06:55	07:29 (61)	07:31	07:48	08:14 (63)	
	21:12	20:43	19:52	6 07:35 (61)	18:54	17:06	37 09:39 (60)	
9	05:49	06:20	06:56	07:25 (61)	07:32	07:49	08:14 (63)	
	21:12	20:42	19:50	13 07:38 (61)	18:53	17:05	38 09:39 (60)	
10	05:50	06:21	06:57	07:23 (61)	07:33	07:50	08:15 (63)	
	21:11	20:40	19:48	16 07:39 (61)	18:51	17:04	38 09:40 (60)	
11	05:51	06:22	06:59	07:21 (61)	07:34	07:51	08:16 (63)	
	21:11	20:39	19:46	19 07:40 (61)	18:49	17:03	38 09:41 (60)	
12	05:51	06:24	07:00	07:21 (61)	07:36	07:52	08:17 (63)	
	21:10	20:38	19:45	19 07:40 (61)	18:47	17:02	39 09:42 (60)	
13	05:52	06:25	07:01	07:22 (61)	07:37	07:53	08:18 (63)	
	21:10	20:36	19:43	18 07:40 (61)	18:46	17:00	39 09:43 (60)	
14	05:53	06:26	07:02	07:23 (61)	07:38	07:54	08:19 (63)	
	21:09	20:35	19:41	17 07:40 (61)	18:44	16:59	38 09:44 (60)	
15	05:54	06:27	07:03	07:24 (61)	07:39	07:55	08:20 (63)	
	21:08	20:33	19:39	16 07:40 (61)	18:42	16:58	39 09:45 (60)	
16	05:55	06:28	07:04	07:26 (61)	07:41	07:56	08:21 (63)	
	21:08	20:32	19:37	14 07:40 (61)	18:40	16:57	39 09:45 (60)	
17	05:56	06:29	07:06	07:27 (61)	07:42	07:57	08:22 (63)	
	21:07	20:30	19:35	13 07:40 (61)	18:39	16:56	39 09:46 (60)	
18	05:57	06:31	07:07	07:28 (61)	07:43	07:58	08:23 (63)	
	21:06	20:28	19:33	11 07:39 (61)	18:37	16:56	39 09:47 (60)	
19	05:58	06:32	07:08	07:29 (61)	07:44	07:59	08:24 (63)	
	21:05	20:27	19:31	8 07:37 (61)	18:35	16:55	39 09:47 (60)	
20	05:59	06:33	07:09	07:30 (61)	07:46	07:58	08:25 (63)	
	21:05	20:25	19:30	6 07:36 (61)	18:34	16:54	39 09:48 (60)	
21	06:00	06:34	07:10	07:31 (61)	07:47	07:58	08:26 (63)	
	21:04	20:24	19:28	3 07:34 (61)	18:32	16:53	7 08:10 (63) 39 09:48 (60)	
22	06:01	06:35	07:11	07:48	07:30	08:01 (63)	07:59	08:24 (63)
	21:03	20:22	19:26	18:30	16:52	11 08:12 (63)	16:48	38 09:49 (60)
23	06:02	06:36	07:13	07:50	07:31	08:01 (63)	07:59	08:24 (63)
	21:02	20:20	19:24	18:29	16:52	13 08:14 (63)	16:49	39 09:49 (60)
24	06:03	06:38	07:14	07:51	07:32	08:00 (63)	08:00	08:25 (63)
	21:01	20:19	19:22	18:27	16:51	15 08:15 (63)	16:50	39 09:50 (60)
25	06:04	06:39	07:15	07:52	07:33	07:59 (63)	08:00	08:25 (63)
	21:00	20:17	19:20	18:26	16:50	16 08:15 (63)	16:50	39 09:50 (60)
26	06:05	06:40	07:16	07:54	07:35	08:00 (63)	08:00	08:25 (63)
	20:59	20:15	19:18	18:24	16:50	17 08:17 (63)	16:51	39 09:50 (60)
27	06:06	06:41	07:17	07:55	07:36	08:01 (63)	08:01	08:26 (63)
	20:58	20:13	19:16	18:23	16:49	16 08:17 (63)	16:51	38 09:51 (60)
28	06:07	06:42	07:19	07:56	07:37	08:02 (63)	08:01	08:26 (63)
	20:57	20:12	19:15	18:21	16:48	16 08:18 (63)	16:52	39 09:51 (60)
29	06:08	06:43	07:20	07:58	07:38	08:03 (63)	08:01	08:26 (63)
	20:56	20:10	19:13	18:20	16:48	15 08:18 (63)	16:53	38 09:51 (60)
30	06:09	06:45	07:21	07:59	07:39	08:05 (63)	08:01	08:26 (63)
	20:55	20:08	19:11	18:18	16:48	16 09:22 (60)	16:54	39 09:51 (60)
31	06:10	06:46		08:00		08:01	08:26 (63)	
	20:54	20:06		18:17		16:55	38 09:51 (60)	
Potential sun hours	470	435	377	341	289	276	1151	
Total, worst case			179		142		0.49	
Sun reduction			0.69		0.50		0.98	
Oper. time red.			0.98		0.98		0.71	
Wind dir. red.			0.59		0.69		0.34	
Total reduction			0.40		0.34		0.34	
Total, real			72		49		394	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H254 - H254

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:27	06:43 (62) 21:01	05:44 21:14	05:44 20:52	06:11 20:05	07:22 19:09	07:02 17:15	07:41 16:47
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:29	06:47 (62) 21:02	05:44 21:14	05:45 20:51	06:12 20:03	07:23 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:42 17:36	07:00 18:14	07:04 19:53	06:14 20:30	06:14 21:03	05:45 21:13	05:46 20:50	06:13 20:01	07:25 19:05	07:04 17:13	07:43 16:46
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	06:12 20:31	06:12 21:04	05:46 21:13	06:15 20:49	06:15 20:01	07:26 19:03	07:06 17:11	07:44 16:46
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	06:11 21:05	05:46 21:13	06:16 20:47	06:16 20:01	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:58 19:57	06:10 20:34	06:10 21:05	05:47 21:13	06:17 20:46	06:17 20:05	07:28 19:00	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	06:08 20:35	06:08 21:06	05:48 21:12	06:18 20:45	06:18 20:05	07:29 18:56	07:10 17:07	07:47 16:46
8	08:01 17:03	07:36 17:43	07:52 18:20	06:55 19:59	06:07 20:36	06:07 21:07	05:48 21:12	06:19 20:43	06:19 20:05	07:31 19:52	07:11 18:54	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	06:06 20:37	06:06 21:07	05:49 21:12	06:20 20:42	06:20 20:05	07:32 19:50	07:12 18:53	07:49 16:45
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	06:04 20:38	06:04 21:08	05:50 21:11	06:21 20:40	06:21 20:05	07:33 19:48	07:14 18:51	07:50 16:45
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:39	06:03 21:09	05:51 21:11	06:23 20:39	06:23 20:05	07:34 18:49	07:15 17:03	07:51 16:45
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	06:02 20:41	06:02 21:09	05:51 21:10	06:24 20:38	06:24 20:07	07:36 18:47	07:17 17:02	07:52 16:46
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:05	06:01 20:42	06:01 21:10	05:52 21:10	06:25 20:36	06:25 20:07	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:03	06:00 20:43	06:00 21:10	05:53 21:09	06:26 20:35	06:26 20:07	07:38 18:44	07:19 16:59	07:53 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	05:59 20:44	05:59 21:11	06:27 21:08	06:27 20:33	06:27 20:07	07:39 18:42	07:21 16:58	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:57 20:45	05:57 21:11	06:28 21:08	06:28 20:32	06:28 20:07	07:41 19:37	07:22 18:40	07:55 16:46
17	07:57 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:46	05:56 21:12	06:30 21:07	06:30 20:30	06:30 20:07	07:42 18:39	07:23 16:57	07:56 16:46
18	07:57 17:15	07:22 17:57	07:33 19:33	06:37 20:12	05:55 20:47	05:55 21:12	06:31 21:06	06:31 20:28	06:31 20:07	07:43 18:37	07:25 16:56	07:56 16:47
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	05:54 20:49	05:54 21:12	06:32 21:05	06:32 20:27	06:32 20:07	07:45 18:35	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	05:53 20:50	05:53 21:13	06:33 21:05	06:33 20:25	06:33 20:07	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:32 20:15	05:52 20:51	05:52 21:13	06:34 21:04	06:34 20:24	06:34 20:07	07:47 18:28	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:16	06:51 (62) 20:52	06:51 (62) 21:13	06:01 21:03	06:35 20:22	06:35 20:07	07:11 18:30	07:48 16:52	07:30 16:48
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	06:50 (62) 20:53	06:50 (62) 21:13	06:02 21:02	06:36 20:20	06:36 20:07	07:13 18:29	07:31 16:52	07:59 16:49
24	07:52 17:23	07:12 18:04	07:22 19:41	06:28 20:19	06:48 (62) 20:54	06:48 (62) 21:13	06:03 21:02	06:38 20:20	06:38 20:07	07:14 18:27	07:32 16:51	08:00 16:50
25	07:52 17:24	07:10 18:06	07:20 19:42	06:26 20:20	06:47 (62) 20:55	06:47 (62) 21:14	06:04 21:00	06:39 20:17	06:39 20:07	07:15 18:26	07:33 16:50	08:00 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:21	06:45 (62) 20:56	06:45 (62) 21:14	06:05 20:59	06:40 20:15	06:40 20:07	07:16 18:24	07:35 16:50	08:00 16:51
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	06:44 (62) 20:57	06:44 (62) 21:14	06:06 20:58	06:41 20:13	06:41 20:07	07:17 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:05 18:10	07:15 19:46	06:21 20:24	06:42 (62) 20:58	06:42 (62) 21:14	06:07 20:57	06:42 20:12	06:42 20:07	07:19 18:21	07:37 16:49	08:01 16:52
29	07:48 17:29	07:04 19:47	07:13 20:25	06:20 20:59	06:41 (62) 20:59	06:41 (62) 21:14	06:08 20:56	06:43 20:10	06:43 20:07	07:20 18:20	07:38 16:48	08:01 16:53
30	07:47 17:31	07:03 19:48	07:11 20:26	06:18 21:00	06:40 (62) 20:54	06:40 (62) 21:14	06:09 20:55	06:45 20:08	06:45 20:07	07:21 18:18	07:39 16:48	08:01 16:54
31	07:46 17:32	07:09 19:49	07:09 20:09	06:18 21:01	06:40 (62) 20:54	06:40 (62) 21:14	06:09 20:54	06:45 20:06	06:45 20:07	07:22 18:17	07:40 16:48	08:01 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction				0.61	0.65			0.74				
Oper. time red.				0.98	0.98			0.98				
Wind dir. red.				0.54	0.54			0.54				
Total reduction				0.32	0.34			0.39				
Total, real				22	1			29				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H255 - H255

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 1 row of values: 0.57, 0.59, 0.59, 0.61, 0.65, 0.70, 0.76, 0.74, 0.69, 0.63, 0.50, 0.49

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 1 row of values: 948, 364, 341, 373, 483, 625, 1,207, 923, 579, 685, 869, 1,169, 8,564

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (January to June) and rows for each day of the month, including sun rise/set times, shadow start/end times, and potential sun hours.

Table layout: For each day in each month the following matrix apply

Matrix defining table layout: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H255 - H255

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:08 (59)	06:11	06:47	07:22	07:02	07:41		
	21:14	9 06:17 (59)	20:52	20:05	19:09	17:15	16:47		
2	05:45	06:09 (59)	06:12	06:48	07:23	07:03	07:42		
	21:14	9 06:18 (59)	20:51	20:03	19:07	17:14	16:47		
3	05:45	06:09 (59)	06:13	20:12 (56)	06:49	07:25	07:04	07:43	
	21:13	9 06:18 (59)	20:50	4 20:16 (56)	20:01	19:05	17:13	16:47	
4	05:46	06:10 (59)	06:15	20:09 (56)	06:51	07:26	07:06	07:44	
	21:13	9 06:19 (59)	20:49	9 20:18 (56)	19:59	19:04	17:11	16:46	
5	05:46	06:11 (59)	06:16	20:08 (56)	06:52	07:27	07:07	07:45	
	21:13	8 06:19 (59)	20:47	12 20:20 (56)	19:57	19:02	17:10	16:46	
6	05:47	06:11 (59)	06:17	20:06 (56)	06:53	07:28	18:25 (66)	07:08	07:46
	21:13	8 06:19 (59)	20:46	14 20:20 (56)	19:56	19:00	3 18:28 (66)	17:09	16:46
7	05:48	06:12 (59)	06:18	20:05 (56)	06:54	07:29	18:22 (66)	07:10	07:47
	21:12	7 06:19 (59)	20:45	14 20:19 (56)	19:54	18:56	10 18:32 (66)	17:07	16:46
8	05:48	06:13 (59)	06:19	20:05 (56)	06:55	07:31	18:20 (66)	07:11	07:48
	21:12	7 06:20 (59)	20:43	12 20:17 (56)	19:52	18:54	11 18:31 (66)	17:06	16:46
9	05:49	06:13 (59)	06:20	20:04 (56)	06:56	07:32	18:18 (66)	07:13	07:49
	21:12	6 06:19 (59)	20:42	12 20:16 (56)	19:50	18:53	11 18:29 (66)	17:05	16:45
10	05:50	06:14 (59)	06:21	20:04 (56)	06:57	07:33	18:17 (66)	07:14	07:50
	21:11	6 06:20 (59)	20:41	11 20:15 (56)	19:48	18:51	10 18:27 (66)	17:04	16:45
11	05:51	06:15 (59)	06:23	20:04 (56)	06:59	07:34	18:18 (66)	07:15	07:51
	21:11	5 06:20 (59)	20:39	9 20:13 (56)	19:46	18:49	8 18:26 (66)	17:03	16:45
12	05:52	06:16 (59)	06:24	20:05 (56)	07:00	07:36	18:17 (66)	07:17	07:52
	21:10	5 06:21 (59)	20:38	8 20:13 (56)	19:45	18:47	7 18:24 (66)	17:02	16:46
13	05:52	06:16 (59)	06:25	20:05 (56)	07:01	07:37	18:17 (66)	07:18	07:53
	21:10	4 06:20 (59)	20:36	6 20:11 (56)	19:43	18:46	5 18:22 (66)	17:01	16:46
14	05:53	06:17 (59)	06:26	20:05 (56)	07:02	07:38	18:18 (66)	07:19	07:53
	21:09	3 06:20 (59)	20:35	5 20:10 (56)	19:41	18:44	3 18:21 (66)	16:59	16:46
15	05:54	06:18 (59)	06:27	20:06 (56)	07:03	07:39		07:21	07:54
	21:08	2 06:20 (59)	20:33	2 20:08 (56)	19:39	18:42		16:58	16:46
16	05:55	06:19 (59)	06:28		07:04	07:41		07:22	07:55
	21:08	1 06:20 (59)	20:32		19:37	18:40		16:57	16:46
17	05:56		06:30		07:06	07:42		07:23	07:56
	21:07		20:30		19:35	18:39		16:57	16:46
18	05:57		06:31		07:07	07:43		07:25	07:56
	21:06		20:28		19:33	18:37		16:56	16:47
19	05:58		06:32		07:08	07:45		07:26	07:57
	21:05		20:27		19:31	18:35		16:55	16:47
20	05:59		06:33		07:09	07:46		07:27	07:58
	21:05		20:25		19:30	18:34		16:54	16:48
21	06:00		06:34		07:10	07:47		07:28	07:58
	21:04		20:24		19:28	18:32		16:53	16:48
22	06:01		06:35		07:11	07:48		07:30	07:59
	21:03		20:22		19:26	18:30		16:52	16:49
23	06:02		06:37		07:13	07:50		07:31	07:59
	21:02		20:20		19:24	18:29		16:52	16:49
24	06:03		06:38		07:14	07:51		07:32	08:00
	21:01		20:19		19:22	18:27		16:51	16:50
25	06:04		06:39		07:15	07:52		07:34	08:00
	21:00		20:17		19:20	18:26		16:50	16:50
26	06:05		06:40		07:16	07:54		07:35	08:00
	20:59		20:15		19:18	18:24		16:50	16:51
27	06:06		06:41		07:17	07:55		07:36	08:01
	20:58		20:13		19:16	18:23		16:49	16:52
28	06:07		06:42		07:19	07:56		07:37	08:01
	20:57		20:12		19:15	18:21		16:49	16:52
29	06:08		06:44		07:20	07:58		07:38	08:01
	20:56		20:10		19:13	18:20		16:48	16:53
30	06:09		06:45		07:21	07:59		07:40	08:01
	20:55		20:08		19:11	18:18		16:48	16:54
31	06:10		06:46			08:00			08:02
	20:54		20:06			18:17			16:55
Potential sun hours	470	435		377	341		289		276
Total, worst case	98		118		68				
Sun reduction	0.76		0.74		0.63				
Oper. time red.	0.98		0.98		0.98				
Wind dir. red.	0.56		0.63		0.53				
Total reduction	0.42		0.46		0.33				
Total, real	41		54		22				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H257 - H257

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	08:38 (58)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	13 08:51 (58)	17:34	18:11	19:51	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	08:39 (58)	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42
	16:57	12 08:51 (58)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	08:40 (58)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:58	11 08:51 (58)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47
4	08:02	08:41 (58)	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	9 08:50 (58)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46
5	08:02	08:43 (58)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	7 08:50 (58)	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	08:46 (58)	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	2 08:48 (58)	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:01		07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02		17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:46
8	08:01		07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03		17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46
9	08:01		07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04		17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01		07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50
	17:05		17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00		07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15	07:51
	17:06		17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00		07:31	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07		17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00		07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08		17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59		07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10		17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59		07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11		17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58		07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12		17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:58	16:46
17	07:58		07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13		17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57		07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15		17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56		07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16		17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56		07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17		18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55		07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19		18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54		07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20		18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:49
23	07:53		07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21		18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53		07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23		18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52		07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24		18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51		07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25		18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50		07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27		18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49		07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01
	17:28		18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48			07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:38	08:01
	17:29			19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47			07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:01
	17:31			19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46			07:09		05:45		06:10	06:46		08:00		08:02
	17:32			19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276	384
Total, worst case													0.49
Sun reduction													0.98
Oper. time red.													0.70
Wind dir. red.													0.34
Total reduction													0.34
Total, real													129

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H258 - H258

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:02	07:45	07:04	07:08	07:41 (56)	06:17	05:44	06:19 (55)		
	16:56	17:34	18:11	19:51	27 08:08 (56)	20:28	21:02	34 06:53 (55)		
2	08:02	07:44	07:02	07:06	07:42 (56)	06:15	05:44	06:19 (55)		
	16:57	17:35	18:12	19:52	25 08:07 (56)	20:29	21:02	36 06:55 (55)		
3	08:02	07:42	07:00	07:04	07:43 (56)	06:14	05:43	06:19 (55)		
	16:58	17:37	18:14	19:53	22 08:05 (56)	20:30	21:03	37 06:56 (55)		
4	08:02	07:41	06:59	07:02	07:44 (56)	06:13	05:43	06:17 (55)		
	16:59	17:38	18:15	19:54	19 08:03 (56)	20:31	21:04	39 06:56 (55)		
5	08:02	07:40	06:57	07:00	07:46 (56)	06:11	05:42	06:17 (55)		
	17:00	17:39	18:16	19:56	14 08:00 (56)	20:32	21:05	40 06:57 (55)		
6	08:02	07:39	06:55	06:59	07:50 (56)	06:10	05:42	06:16 (55)		
	17:01	17:41	18:18	19:57	6 07:56 (56)	20:34	21:06	41 06:57 (55)		
7	08:02	07:37	06:53	06:57		06:09	05:41	06:16 (55)		
	17:02	17:42	18:19	19:58		20:35	21:06	42 06:58 (55)		
8	08:01	07:36	07:52	06:55	07:15 (57)	06:07	05:41	06:16 (55)		
	17:03	17:44	18:20	19:59	3 07:18 (57)	20:36	21:07	43 06:59 (55)		
9	08:01	07:35	07:50	06:53	07:13 (57)	06:06	05:41	06:16 (55)		
	17:04	17:45	19:22	20:01	6 07:19 (57)	20:37	21:08	44 07:00 (55)		
10	08:01	07:33	07:48	06:51	07:12 (57)	06:05	05:41	06:15 (55)		
	17:05	17:46	19:23	20:02	9 07:21 (57)	20:38	21:08	45 07:00 (55)		
11	08:00	07:32	07:46	06:50	07:10 (57)	06:03	05:40	06:15 (55)		
	17:06	17:48	19:24	20:03	11 07:21 (57)	20:40	21:09	45 07:00 (55)		
12	08:00	07:31	07:44	06:48	07:08 (57)	06:02	05:40	06:16 (55)		
	17:07	17:49	19:26	20:04	13 07:21 (57)	20:41	21:09	45 07:01 (55)		
13	08:00	07:29	07:43	06:46	07:06 (57)	06:01	05:40	06:16 (55)		
	17:09	17:51	19:27	20:05	14 07:20 (57)	20:42	21:10	45 07:01 (55)		
14	07:59	07:28	07:41	06:44	07:05 (57)	06:00	05:40	06:16 (55)		
	17:10	17:52	19:28	20:07	16 07:21 (57)	20:43	21:11	46 07:02 (55)		
15	07:59	07:26	07:39	06:43	07:03 (57)	05:59	05:40	06:16 (55)		
	17:11	17:53	19:29	20:08	17 07:20 (57)	20:44	21:11	46 07:02 (55)		
16	07:58	07:25	07:37	06:41	07:01 (57)	05:58	05:40	06:16 (55)		
	17:12	17:55	19:31	20:09	18 07:19 (57)	20:45	21:11	47 07:03 (55)		
17	07:58	07:23	07:35	06:39	07:02 (57)	05:56	05:40	06:16 (55)		
	17:13	17:56	19:32	20:10	17 07:19 (57)	20:46	21:12	47 07:03 (55)		
18	07:57	07:22	07:34	07:54 (56)	06:38	07:02 (57)	05:55	06:16 (55)		
	17:15	17:58	19:33	10 08:04 (56)	20:12	15 07:17 (57)	20:48	21:12	47 07:03 (55)	
19	07:56	07:20	07:32	07:52 (56)	06:36	07:03 (57)	05:54	06:16 (55)		
	17:16	17:59	19:34	15 08:07 (56)	20:13	12 07:15 (57)	20:49	21:13	47 07:03 (55)	
20	07:56	07:19	07:30	07:50 (56)	06:34	07:05 (57)	05:53	06:17 (55)		
	17:17	18:00	19:36	19 08:09 (56)	20:14	9 07:14 (57)	20:50	21:13	47 07:04 (55)	
21	07:55	07:17	07:28	07:48 (56)	06:33		05:52	06:17 (55)		
	17:19	18:00	19:37	22 08:10 (56)	20:15		20:51	21:13	47 07:04 (55)	
22	07:54	07:16	07:26	07:46 (56)	06:31		05:52	06:17 (55)		
	17:20	18:02	19:38	24 08:10 (56)	20:17		20:52	21:13	47 07:04 (55)	
23	07:53	07:14	07:24	07:44 (56)	06:29		05:51	06:17 (55)		
	17:21	18:03	19:39	27 08:11 (56)	20:18		20:53	21:14	47 07:04 (55)	
24	07:53	07:12	07:22	07:43 (56)	06:28		05:50	06:17 (55)		
	17:23	18:04	19:41	29 08:12 (56)	20:19		20:54	21:14	47 07:04 (55)	
25	07:52	07:11	07:21	07:42 (56)	06:26		05:49	06:18 (55)		
	17:24	18:06	19:42	30 08:12 (56)	20:20		20:55	12 06:42 (55)	21:14	47 07:05 (55)
26	07:51	07:09	07:19	07:41 (56)	06:25		05:48	06:27 (55)	05:42	06:18 (55)
	17:25	18:07	19:43	31 08:12 (56)	20:22		20:56	18 06:45 (55)	21:14	47 07:05 (55)
27	07:50	07:07	07:17	07:41 (56)	06:23		05:47	06:24 (55)	05:42	06:19 (55)
	17:27	18:08	19:44	30 08:11 (56)	20:23		20:57	22 06:46 (55)	21:14	46 07:05 (55)
28	07:49	07:06	07:15	07:40 (56)	06:21		05:47	06:24 (55)	05:43	06:19 (55)
	17:28	18:10	19:46	31 08:11 (56)	20:24		20:58	25 06:49 (55)	21:14	46 07:05 (55)
29	07:48		07:13	07:40 (56)	06:20		05:46	06:22 (55)	05:43	06:19 (55)
	17:30		19:47	30 08:10 (56)	20:25		20:59	28 06:50 (55)	21:14	46 07:05 (55)
30	07:47		07:11	07:40 (56)	06:18		05:45	06:20 (55)	05:44	06:20 (55)
	17:31		19:48	29 08:09 (56)	20:26		21:00	31 06:51 (55)	21:14	45 07:05 (55)
31	07:46		07:10	07:41 (56)			05:45	06:20 (55)		
	17:32		19:49	28 08:09 (56)			21:01	33 06:53 (55)		
Potential sun hours	287	292	369	403		458		464		
Total, worst case			355	273		169		1328		
Sun reduction			0.59	0.61		0.65		0.70		
Oper. time red.			0.98	0.98		0.98		0.98		
Wind dir. red.			0.60	0.57		0.56		0.56		
Total reduction			0.35	0.34		0.36		0.38		
Total, real			123	94		60		510		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H258 - H258

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:20 (55)	06:11	06:47	07:09 (57)	07:22
	21:14	07:04 (55)	20:52	20:05	07:20 (57)	19:09
2	05:45	06:20 (55)	06:12	06:48	07:10 (57)	07:23
	21:14	07:05 (55)	20:51	20:03	07:18 (57)	19:07
3	05:45	06:21 (55)	06:14	06:49	07:11 (57)	07:25
	21:14	07:05 (55)	20:50	20:01	07:17 (57)	19:05
4	05:46	06:21 (55)	06:15	06:51	07:12 (57)	07:26
	21:13	07:04 (55)	20:49	19:59	07:15 (57)	19:04
5	05:46	06:22 (55)	06:16	06:52		07:27
	21:13	07:05 (55)	20:47	19:58		07:07
6	05:47	06:22 (55)	06:17	06:53	07:46 (56)	07:28
	21:13	07:04 (55)	20:46	19:56	07:50 (56)	19:00
7	05:48	06:23 (55)	06:18	06:54	07:42 (56)	07:30
	21:12	07:04 (55)	20:45	19:54	07:56 (56)	18:56
8	05:49	06:24 (55)	06:19	06:55	07:39 (56)	07:31
	21:12	07:04 (55)	20:43	19:52	07:57 (56)	18:55
9	05:49	06:24 (55)	06:20	06:56	07:37 (56)	07:32
	21:12	07:02 (55)	20:42	19:50	07:59 (56)	18:53
10	05:50	06:26 (55)	06:22	06:58	07:35 (56)	07:33
	21:11	07:02 (55)	20:41	19:48	08:00 (56)	18:51
11	05:51	06:27 (55)	06:23	06:59	07:34 (56)	07:35
	21:11	07:02 (55)	20:39	19:47	08:00 (56)	18:49
12	05:52	06:28 (55)	06:24	07:00	07:32 (56)	07:36
	21:10	07:01 (55)	20:38	19:45	07:32 (56)	18:47
13	05:52	06:29 (55)	06:25	07:01	07:31 (56)	07:37
	21:10	07:01 (55)	20:36	19:43	08:01 (56)	18:46
14	05:53	06:30 (55)	06:26	07:02	07:30 (56)	07:38
	21:09	06:59 (55)	20:35	19:41	08:00 (56)	18:44
15	05:54	06:31 (55)	06:27	07:03	07:31 (56)	07:40
	21:08	06:58 (55)	20:33	19:39	08:01 (56)	18:42
16	05:55	06:33 (55)	06:28	07:05	07:30 (56)	07:41
	21:08	06:57 (55)	20:32	19:37	08:01 (56)	18:41
17	05:56	06:35 (55)	06:30	07:06	07:30 (56)	07:42
	21:07	06:55 (55)	20:30	19:35	08:00 (56)	18:39
18	05:57	06:38 (55)	06:31	07:07	07:29 (56)	07:43
	21:06	06:53 (55)	20:29	19:33	07:59 (56)	18:37
19	05:58	06:42 (55)	06:32	07:08	07:29 (56)	07:45
	21:06	06:49 (55)	20:27	19:32	07:59 (56)	18:35
20	05:59		06:33	07:09	07:30 (56)	07:46
	21:05		20:25	19:30	07:57 (56)	18:34
21	06:00		06:34	07:10	07:31 (56)	07:47
	21:04		20:24	19:28	07:56 (56)	18:32
22	06:01		06:35	07:12	07:33 (56)	07:49
	21:03		20:22	19:26	07:56 (56)	18:31
23	06:02		06:37	07:13	07:34 (56)	07:50
	21:02		20:20	19:24	07:54 (56)	18:29
24	06:03		06:38	07:14	07:35 (56)	07:51
	21:01		20:19	19:22	07:51 (56)	18:27
25	06:04		06:39	07:15	07:36 (56)	07:52
	21:00		20:17	19:20	07:48 (56)	18:26
26	06:05		06:40	07:16		07:54
	20:59		20:15	19:18		18:24
27	06:06		06:41	07:17		07:55
	20:58		20:14	19:17		18:23
28	06:07		06:42	07:19		07:56
	20:57		20:12	19:15		18:21
29	06:08		06:44	07:20		07:58
	20:56		20:10	19:13		18:20
30	06:09		06:45	07:21		07:59
	20:55		20:08	19:11		18:18
31	06:10		06:46	07:08 (57)		08:00
	20:54		20:07	19:11		18:17
Potential sun hours	470	435		377	341	289
Total, worst case	638	133		499		
Sun reduction	0.76	0.74		0.69		
Oper. time red.	0.98	0.98		0.98		
Wind dir. red.	0.56	0.55		0.60		
Total reduction	0.42	0.40		0.40		
Total, real	266	53		202		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H259 - H259

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02	08:26 (55)	07:45	07:04	07:08	06:17	05:44
	16:56	15 08:41 (55)	17:34	18:11	19:51	20:28	12 06:19 (38)
2	08:02	08:26 (55)	07:44	07:02	07:06	06:15	05:44
	16:57	16 08:42 (55)	17:35	18:12	19:52	20:29	12 06:19 (38)
3	08:02	08:26 (55)	07:42	07:00	07:04	06:14	05:43
	16:58	17 08:43 (55)	17:37	18:14	19:53	20:30	13 06:20 (38)
4	08:02	08:26 (55)	07:41	06:59	07:02	06:13	05:43
	16:59	17 08:43 (55)	17:38	18:15	19:54	20:31	13 06:19 (38)
5	08:02	08:26 (55)	07:40	06:57	07:00	06:11	05:42
	17:00	18 08:44 (55)	17:39	18:16	19:56	20:33	13 06:19 (38)
6	08:02	08:26 (55)	07:39	06:55	06:59	06:10	05:42
	17:01	19 08:45 (55)	17:41	18:18	19:57	20:34	13 06:18 (38)
7	08:02	08:25 (55)	07:37	06:53	06:57	06:09	05:41
	17:02	20 08:45 (55)	17:42	18:19	19:58	20:35	13 06:18 (38)
8	08:01	08:25 (55)	07:36	07:52	06:55	06:07	05:41
	17:03	21 08:46 (55)	17:44	18:20	19:59	20:36	13 06:18 (38)
9	08:01	08:25 (55)	07:35	07:50	06:53	06:06	05:41
	17:04	22 08:47 (55)	17:45	19:22	20:01	20:37	12 06:18 (38)
10	08:01	08:24 (55)	07:33	07:48	06:51	06:05	05:41
	17:05	23 08:47 (55)	17:46	19:23	20:02	20:38	11 06:17 (38)
11	08:01	08:24 (55)	07:32	07:46	06:50	06:03	05:40
	17:06	24 08:48 (55)	17:48	19:24	20:03	20:40	10 06:17 (38)
12	08:00	08:24 (55)	07:31	07:45	06:48	06:02	05:40
	17:07	25 08:49 (55)	17:49	19:26	20:04	20:41	10 06:17 (38)
13	08:00	08:23 (55)	07:29	07:43	06:46	06:01	05:40
	17:09	26 08:49 (55)	17:51	19:27	20:06	20:42	9 06:17 (38)
14	07:59	08:23 (56)	07:28	07:41	06:44	06:00	05:40
	17:10	27 08:50 (55)	17:52	19:28	20:07	20:43	8 06:17 (38)
15	07:59	08:22 (56)	07:26	07:39	06:43	05:59	05:40
	17:11	28 08:50 (55)	17:53	19:29	20:08	20:44	8 06:17 (38)
16	07:58	08:21 (56)	07:25	07:37	06:41	05:58	05:40
	17:12	29 08:50 (55)	17:55	19:31	20:09	20:45	7 06:17 (38)
17	07:58	08:21 (56)	07:23	07:35	06:39	05:56	05:40
	17:13	30 08:51 (55)	17:56	19:32	20:10	20:47	5 06:16 (38)
18	07:57	08:20 (56)	07:22	07:34	06:38	05:55	05:40
	17:15	31 08:51 (55)	17:58	19:33	20:12	20:48	5 06:16 (38)
19	07:56	08:20 (56)	07:20	07:32	06:36	05:54	05:40
	17:16	31 08:51 (55)	17:59	19:34	20:13	20:49	5 06:16 (38)
20	07:56	08:20 (56)	07:19	07:30	06:34	05:53	05:40
	17:17	31 08:51 (55)	18:00	19:36	20:14	20:50	4 06:17 (38)
21	07:55	08:22 (56)	07:17	07:28	06:33	05:52	06:15 (38)
	17:19	29 08:51 (55)	18:00	19:37	20:15	20:51	2 06:17 (38)
22	07:54	08:23 (56)	07:16	07:26	06:31	05:52	06:14 (38)
	17:20	28 08:51 (55)	18:02	19:38	20:17	20:52	3 06:17 (38)
23	07:53	08:25 (56)	07:14	07:24	06:29	05:51	06:13 (38)
	17:21	26 08:51 (55)	18:03	19:39	20:18	20:53	5 06:18 (38)
24	07:53	08:27 (56)	07:12	07:22	06:28	05:50	06:12 (38)
	17:23	23 08:50 (55)	18:04	19:41	20:19	20:54	6 06:18 (38)
25	07:52	08:30 (55)	07:11	07:21	06:26	05:49	06:12 (38)
	17:24	20 08:50 (55)	18:06	19:42	20:20	20:55	7 06:19 (38)
26	07:51	08:31 (55)	07:09	07:19	06:25	05:48	06:11 (38)
	17:25	18 08:49 (55)	18:07	19:43	20:22	20:56	8 06:19 (38)
27	07:50	08:33 (55)	07:07	07:17	06:23	05:47	06:10 (38)
	17:27	15 08:48 (55)	18:08	19:44	20:23	20:57	9 06:19 (38)
28	07:49	08:35 (55)	07:06	07:15	06:21	05:47	06:10 (38)
	17:28	11 08:46 (55)	18:10	19:46	20:24	20:58	9 06:19 (38)
29	07:48	08:39 (55)		07:13	06:20	05:46	06:09 (38)
	17:30	3 08:42 (55)		19:47	20:25	20:59	10 06:19 (38)
30	07:47			07:11	06:18	05:45	06:08 (38)
	17:31			19:48	20:26	21:00	11 06:19 (38)
31	07:46			07:10		05:45	06:08 (38)
	17:32			19:49		21:01	11 06:19 (38)
Potential sun hours	287	292	369	403	458		464
Total, worst case	643				81		258
Sun reduction	0.57				0.65		0.70
Oper. time red.	0.98				0.98		0.98
Wind dir. red.	0.70				0.56		0.56
Total reduction	0.39				0.36		0.39
Total, real	252				29		100

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H259 - H259

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11 (38)	06:11	06:47	07:22	07:02
	21:14	10	06:21 (38)	20:53	20:05	19:09
2	05:45	06:11 (38)	06:12	06:48	07:24	07:03
	21:14	11	06:22 (38)	20:51	20:03	19:07
3	05:45	06:12 (38)	06:14	06:49	07:25	07:05
	21:14	11	06:23 (38)	20:50	20:01	19:05
4	05:46	06:11 (38)	06:15	06:51	07:26	07:06
	21:13	12	06:23 (38)	20:49	19:59	19:04
5	05:46	06:11 (38)	06:16	06:52	07:27	07:07
	21:13	13	06:24 (38)	20:47	19:58	19:02
6	05:47	06:11 (38)	06:17	06:53	07:28	07:09
	21:13	13	06:24 (38)	20:46	19:56	19:00
7	05:48	06:12 (38)	06:18	06:54	07:30	07:10
	21:13	13	06:25 (38)	20:45	19:54	18:56
8	05:49	06:13 (38)	06:19	06:55	07:31	07:11
	21:12	13	06:26 (38)	20:43	19:52	18:55
9	05:49	06:13 (38)	06:20	06:56	07:32	07:13
	21:12	13	06:26 (38)	20:42	19:50	18:53
10	05:50	06:14 (38)	06:22	06:58	07:33	07:14
	21:11	12	06:26 (38)	20:41	19:48	18:51
11	05:51	06:15 (38)	06:23	06:59	07:35	07:15
	21:11	12	06:27 (38)	20:39	19:47	18:49
12	05:52	06:16 (38)	06:24	07:00	07:36	07:17
	21:10	12	06:28 (38)	20:38	19:45	18:47
13	05:52	06:17 (38)	06:25	07:01	07:37	07:18
	21:10	11	06:28 (38)	20:36	19:43	18:46
14	05:53	06:17 (38)	06:26	07:02	07:38	07:19
	21:09	10	06:27 (38)	20:35	19:41	18:44
15	05:54	06:18 (38)	06:27	07:03	07:40	07:21
	21:09	10	06:28 (38)	20:33	19:39	18:42
16	05:55	06:19 (38)	06:28	07:05	07:41	07:22
	21:08	9	06:28 (38)	20:32	19:37	18:41
17	05:56	06:20 (38)	06:30	07:06	07:42	07:23
	21:07	8	06:28 (38)	20:30	19:35	18:39
18	05:57	06:21 (38)	06:31	07:07	07:43	07:25
	21:06	7	06:28 (38)	20:29	19:33	18:37
19	05:58	06:22 (38)	06:32	07:08	07:45	07:26
	21:06	6	06:28 (38)	20:27	19:32	18:35
20	05:59	06:23 (38)	06:33	07:09	07:46	07:27
	21:05	5	06:28 (38)	20:25	19:30	18:34
21	06:00	06:24 (38)	06:34	07:10	07:47	07:29
	21:04	4	06:28 (38)	20:24	19:28	18:32
22	06:01	06:25 (38)	06:35	07:12	07:49	07:30
	21:03	3	06:28 (38)	20:22	19:26	18:31
23	06:02	06:26 (38)	06:37	07:13	07:50	07:31
	21:02	1	06:27 (38)	20:20	19:24	18:29
24	06:03		06:38	07:14	07:51	07:32
	21:01		20:19	19:22	18:27	16:51
25	06:04		06:39	07:15	07:53	07:34
	21:00		20:17	19:20	18:26	16:50
26	06:05		06:40	07:16	07:54	07:35
	20:59		20:15	19:18	18:24	16:50
27	06:06		06:41	07:18	07:55	07:36
	20:58		20:14	19:17	18:23	16:49
28	06:07		06:42	07:19	07:56	07:37
	20:57		20:12	19:15	18:21	16:49
29	06:08		06:44	07:20	07:58	07:39
	20:56		20:10	19:13	18:20	16:48
30	06:09		06:45	07:21	07:59	07:40
	20:55		20:08	19:11	18:18	16:48
31	06:10		06:46		08:01	08:02
	20:54		20:07		18:17	16:55
Potential sun hours	470	435	377	341	289	276
Total, worst case	219				432	456
Sun reduction	0.76				0.50	0.49
Oper. time red.	0.98				0.98	0.98
Wind dir. red.	0.56				0.69	0.70
Total reduction	0.42				0.34	0.34
Total, real	92				149	154

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H260 - H260

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02	07:45	07:04	07:08	06:17	05:44	06:14 (37)
	16:56	17:34	18:11	19:51	20:28	21:02	10 06:24 (37)
2	08:02	07:44	07:02	07:06	06:15	05:44	06:16 (37)
	16:57	17:35	18:12	19:52	20:29	21:02	8 06:24 (37)
3	08:02	07:42	07:00	07:04	06:14	05:43	06:18 (37)
	16:58	17:37	18:14	19:53	20:30	21:03	5 06:23 (37)
4	08:02	07:41	06:59	07:02	06:13	05:43	
	16:59	17:38	18:15	19:54	20:31	21:04	
5	08:02	08:26 (55)	07:40	06:57	07:00	06:11	05:42
	17:00	08:27 (55)	17:39	18:16	19:56	20:33	21:05
6	08:02	08:26 (55)	07:39	06:55	06:59	06:10	05:42
	17:01	08:28 (55)	17:41	18:18	19:57	20:34	21:06
7	08:02	08:25 (55)	07:37	06:53	06:57	06:09	05:41
	17:02	08:28 (55)	17:42	18:19	19:58	20:35	21:06
8	08:01	08:25 (55)	07:36	07:52	06:55	06:07	05:41
	17:03	08:29 (55)	17:44	18:20	19:59	20:36	21:07
9	08:01	08:25 (55)	07:35	07:50	06:53	06:06	05:41
	17:04	08:31 (55)	17:45	19:22	20:01	20:37	21:08
10	08:01	08:24 (55)	07:34	07:48	06:51	06:05	05:41
	17:05	08:31 (55)	17:46	19:23	20:02	20:38	21:08
11	08:01	08:24 (55)	07:32	07:46	06:50	06:03	05:40
	17:06	08:32 (55)	17:48	19:24	20:03	20:40	21:09
12	08:00	08:24 (55)	07:31	07:45	06:48	06:02	06:24 (37) 05:40
	17:07	08:33 (55)	17:49	19:26	20:04	20:41	1 06:25 (37) 21:10
13	08:00	08:23 (55)	07:29	07:43	06:46	06:01	06:23 (37) 05:40
	17:09	08:33 (55)	17:51	19:27	20:06	20:42	3 06:26 (37) 21:10
14	07:59	08:23 (55)	07:28	07:41	06:44	06:00	06:22 (37) 05:40
	17:10	08:35 (55)	17:52	19:28	20:07	20:43	5 06:27 (37) 21:11
15	07:59	08:22 (55)	07:26	07:39	06:43	05:59	06:21 (37) 05:40
	17:11	08:35 (55)	17:53	19:29	20:08	20:44	7 06:28 (37) 21:11
16	07:58	08:21 (55)	07:25	07:37	06:41	05:58	06:20 (37) 05:40
	17:12	08:35 (55)	17:55	19:31	20:09	20:45	8 06:28 (37) 21:12
17	07:58	08:21 (55)	07:23	07:35	06:39	05:56	06:19 (37) 05:40
	17:13	08:36 (55)	17:56	19:32	20:10	20:47	10 06:29 (37) 21:12
18	07:57	08:20 (55)	07:22	07:34	06:38	05:55	06:18 (37) 05:40
	17:15	08:36 (55)	17:58	19:33	20:12	20:48	11 06:29 (37) 21:12
19	07:56	08:19 (55)	07:20	07:32	06:36	05:54	06:17 (37) 05:40
	17:16	08:36 (55)	17:59	19:34	20:13	20:49	12 06:29 (37) 21:13
20	07:56	08:19 (55)	07:19	07:30	06:34	05:53	06:16 (37) 05:40
	17:17	08:37 (55)	18:00	19:36	20:14	20:50	13 06:29 (37) 21:13
21	07:55	08:18 (55)	07:17	07:28	06:33	05:52	06:15 (37) 05:40
	17:19	08:36 (55)	18:00	19:37	20:15	20:51	14 06:29 (37) 21:13
22	07:54	08:18 (55)	07:16	07:26	06:31	05:52	06:14 (37) 05:41
	17:20	08:36 (55)	18:02	19:38	20:17	20:52	15 06:29 (37) 21:13
23	07:53	08:19 (55)	07:14	07:24	06:29	05:51	06:13 (37) 05:41
	17:21	08:36 (55)	18:03	19:40	20:18	20:53	15 06:28 (37) 21:14
24	07:53	08:20 (55)	07:12	07:22	06:28	05:50	06:12 (37) 05:41
	17:23	08:35 (55)	18:04	19:41	20:19	20:54	16 06:28 (37) 21:14
25	07:52	08:21 (55)	07:11	07:21	06:26	05:49	06:12 (37) 05:42
	17:24	08:34 (55)	18:06	19:42	20:20	20:55	16 06:28 (37) 21:14
26	07:51	08:23 (55)	07:09	07:19	06:25	05:48	06:11 (37) 05:42
	17:25	08:33 (55)	18:07	19:43	20:22	20:56	17 06:28 (37) 21:14
27	07:50	08:25 (55)	07:07	07:17	06:23	05:47	06:10 (37) 05:42
	17:27	6 08:31 (55)	18:08	19:44	20:23	20:57	17 06:27 (37) 21:14
28	07:49		07:06	07:15	06:21	05:47	06:12 (37) 05:43
	17:28		18:10	19:46	20:24	20:58	16 06:28 (37) 21:14
29	07:48			07:13	06:20	05:46	06:12 (37) 05:43
	17:30			19:47	20:25	20:59	15 06:27 (37) 21:14
30	07:47			07:11	06:18	05:45	06:12 (37) 05:44
	17:31			19:48	20:26	21:00	14 06:26 (37) 21:14
31	07:46			07:10		05:45	06:14 (37)
	17:32			19:49		21:01	12 06:26 (37)
Potential sun hours	287	292	369	403	458	464	
Total, worst case	252				237	23	
Sun reduction	0.57				0.65	0.70	
Oper. time red.	0.98				0.98	0.98	
Wind dir. red.	0.69				0.56	0.56	
Total reduction	0.39				0.36	0.39	
Total, real	99				85	9	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H260 - H260

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:44	06:11	06:47	07:22	07:02	07:41	08:06 (55)
	21:14	20:53	20:05	19:09	17:16	16:47	8 08:14 (55)
2	05:45	06:12	06:48	07:24	07:03	07:42	08:07 (55)
	21:14	20:51	20:03	19:07	17:14	16:47	7 08:14 (55)
3	05:45	06:14	06:49	07:25	07:05	07:43	08:08 (55)
	21:14	20:50	20:01	19:05	17:13	16:47	6 08:14 (55)
4	05:46	06:15	06:51	07:26	07:06	07:44	08:10 (55)
	21:13	20:49	19:59	19:04	17:11	16:46	5 08:15 (55)
5	05:46	06:16	06:52	07:27	07:07	07:45	08:11 (55)
	21:13	20:48	19:58	19:02	17:10	16:46	3 08:14 (55)
6	05:47	06:17	06:53	07:28	07:09	07:46	08:12 (55)
	21:13	20:46	19:56	19:00	17:09	16:46	2 08:14 (55)
7	05:48	06:18	06:54	07:30	07:10	07:47	08:13 (55)
	21:13	20:45	19:54	18:56	17:08	16:46	1 08:14 (55)
8	05:49	06:19	06:55	07:31	07:11	07:48	
	21:12	20:43	19:52	18:55	17:06	16:46	
9	05:49	06:26 (37)	06:20	06:56	07:32	07:13	07:49
	21:12	2 06:28 (37)	20:42	19:50	18:53	17:05	16:46
10	05:50	06:24 (37)	06:22	06:58	07:33	07:14	07:50
	21:11	7 06:31 (37)	20:41	19:48	18:51	17:04	16:46
11	05:51	06:23 (37)	06:23	06:59	07:35	07:15	07:51
	21:11	9 06:32 (37)	20:39	19:47	18:49	17:03	16:46
12	05:52	06:22 (37)	06:24	07:00	07:36	07:17	07:52
	21:10	12 06:34 (37)	20:38	19:45	18:47	17:02	16:46
13	05:52	06:22 (37)	06:25	07:01	07:37	07:18	07:53
	21:10	13 06:35 (37)	20:36	19:43	18:46	17:01	16:46
14	05:53	06:20 (37)	06:26	07:02	07:38	07:19	07:54
	21:09	15 06:35 (37)	20:35	19:41	18:44	17:00	16:46
15	05:54	06:20 (37)	06:27	07:03	07:40	07:21	07:54
	21:09	16 06:36 (37)	20:33	19:39	18:42	16:59	6 08:04 (55) 16:46
16	05:55	06:20 (37)	06:28	07:05	07:41	07:22	07:56 (55) 07:55
	21:08	16 06:36 (37)	20:32	19:37	18:41	16:58	10 08:06 (55) 16:46
17	05:56	06:20 (37)	06:30	07:06	07:42	07:23	07:55 (55) 07:56
	21:07	17 06:37 (37)	20:30	19:35	18:39	16:57	13 08:08 (55) 16:47
18	05:57	06:21 (37)	06:31	07:07	07:43	07:25	07:54 (55) 07:56
	21:06	17 06:38 (37)	20:29	19:34	18:37	16:56	15 08:09 (55) 16:47
19	05:58	06:22 (37)	06:32	07:08	07:45	07:26	07:53 (55) 07:57
	21:06	16 06:38 (37)	20:27	19:32	18:35	16:55	17 08:10 (55) 16:47
20	05:59	06:23 (37)	06:33	07:09	07:46	07:27	07:53 (55) 07:58
	21:05	16 06:39 (37)	20:25	19:30	18:34	16:54	18 08:11 (55) 16:48
21	06:00	06:24 (37)	06:34	07:10	07:47	07:29	07:53 (55) 07:58
	21:04	15 06:39 (37)	20:24	19:28	18:32	16:53	18 08:11 (55) 16:48
22	06:01	06:25 (37)	06:35	07:12	07:49	07:30	07:55 (55) 07:59
	21:03	14 06:39 (37)	20:22	19:26	18:31	16:52	18 08:13 (55) 16:49
23	06:02	06:26 (37)	06:37	07:13	07:50	07:31	07:56 (55) 07:59
	21:02	13 06:39 (37)	20:20	19:24	18:29	16:52	17 08:13 (55) 16:49
24	06:03	06:27 (37)	06:38	07:14	07:51	07:32	07:57 (55) 08:00
	21:01	12 06:39 (37)	20:19	19:22	18:27	16:51	16 08:13 (55) 16:50
25	06:04	06:28 (37)	06:39	07:15	07:53	07:34	07:59 (55) 08:00
	21:00	11 06:39 (37)	20:17	19:20	18:26	16:50	15 08:14 (55) 16:50
26	06:05	06:29 (37)	06:40	07:16	07:54	07:35	08:00 (55) 08:00
	20:59	10 06:39 (37)	20:15	19:18	18:24	16:50	14 08:14 (55) 16:51
27	06:06	06:30 (37)	06:41	07:18	07:55	07:36	08:01 (55) 08:01
	20:58	9 06:39 (37)	20:14	19:17	18:23	16:49	13 08:14 (55) 16:52
28	06:07	06:31 (37)	06:42	07:19	07:57	07:37	08:02 (55) 08:01
	20:57	8 06:39 (37)	20:12	19:15	18:21	16:49	12 08:14 (55) 16:52
29	06:08	06:32 (37)	06:44	07:20	07:58	07:39	08:04 (55) 08:01
	20:56	6 06:38 (37)	20:10	19:13	18:20	16:48	10 08:14 (55) 16:53
30	06:09	06:33 (37)	06:45	07:21	07:59	07:40	08:05 (55) 08:02
	20:55	4 06:37 (37)	20:08	19:11	18:18	16:48	9 08:14 (55) 16:54
31	06:10	06:34 (37)	06:46		08:01		08:02
	20:54	2 06:36 (37)	20:07		18:17		16:55
Potential sun hours	470	435	377	341	289	276	32
Total, worst case	260				221		0.49
Sun reduction	0.76				0.50		0.98
Oper. time red.	0.98				0.98		0.69
Wind dir. red.	0.56				0.69		0.34
Total reduction	0.42				0.34		11
Total, real	109				76		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H261 - H261

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H262 - H262

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H278 - H278

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H279 - H279

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H280 - H280

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H281 - H281

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:34	07:04 18:11	07:25 (37) 07:35 (37)	07:08 19:51	06:17 20:28
2	08:02 16:57	07:44 17:35	07:02 18:12	07:23 (37) 07:35 (37)	07:06 19:52	06:15 20:29
3	08:02 16:58	07:42 17:37	07:01 18:14	07:21 (37) 07:35 (37)	07:04 19:53	06:14 20:30
4	08:02 16:59	07:41 17:38	06:59 18:15	07:19 (37) 07:35 (37)	07:02 19:54	06:13 20:31
5	08:02 17:00	07:40 17:39	06:57 18:16	07:18 (37) 07:35 (37)	07:00 19:56	06:11 20:33
6	08:02 17:01	07:39 17:41	06:55 18:18	07:16 (37) 07:34 (37)	06:59 19:57	06:10 20:34
7	08:02 17:02	07:37 17:42	06:53 18:19	07:15 (37) 07:33 (37)	06:57 19:58	06:08 20:35
8	08:01 17:03	07:36 17:44	07:52 18:20	08:16 (37) 08:32 (37)	06:55 19:59	06:07 20:36
9	08:01 17:04	07:35 17:45	07:50 19:22	08:17 (37) 08:30 (37)	06:53 20:01	06:06 20:37
10	08:01 17:05	07:34 17:46	07:48 19:23	08:19 (37) 08:26 (37)	06:51 20:02	06:05 20:39
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:40	06:25 (35) 21:09
12	08:00 17:07	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	06:24 (35) 21:10
13	08:00 17:08	07:29 17:51	07:43 19:27	06:46 20:06	06:01 20:42	06:23 (35) 21:10
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:00 20:43	06:22 (35) 21:11
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	05:59 20:44	06:21 (35) 21:11
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 20:45	06:20 (35) 21:12
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	05:56 20:47	06:19 (35) 21:12
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	05:55 20:48	06:18 (35) 21:12
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	05:54 20:49	06:19 (35) 21:13
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	05:53 20:50	06:19 (35) 21:13
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:15	05:52 20:51	06:20 (35) 21:13
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:52 20:52	06:21 (35) 21:14
23	07:53 17:21	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	06:22 (35) 21:14
24	07:53 17:23	07:12 18:04	07:22 19:41	06:28 20:19	05:50 20:54	06:23 (35) 21:14
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	06:27 (35) 21:14
26	07:51 17:25	07:09 18:07	07:30 (37) 07:31 (37)	07:19 19:43	06:25 20:22	05:48 20:56
27	07:50 17:27	07:07 18:08	07:28 (37) 07:33 (37)	07:17 19:44	06:23 20:23	05:47 20:57
28	07:49 17:28	07:06 18:10	07:26 (37) 07:34 (37)	07:15 19:46	06:21 20:24	05:47 20:58
29	07:48 17:30		07:13 19:47	06:20 20:25	05:46 20:59	05:46 21:14
30	07:47 17:31		07:11 19:48	06:18 20:26	05:45 21:00	05:45 21:14
31	07:46 17:32		07:10 19:49	07:10 19:49	05:45 21:01	05:45 21:14
Potential sun hours	287	292	369	403	458	464
Total, worst case		14	141		247	
Sun reduction		0.59	0.59		0.65	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.62	0.62		0.55	
Total reduction		0.36	0.36		0.35	
Total, real		5	51		87	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H281 - H281

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:11	06:35 (35)	06:47	07:22	07:02	07:41	
	21:14	20:53	13 06:48 (35)	20:05	19:09	17:16	16:47	
2	05:45	06:12	06:36 (35)	06:48	07:24	07:03	07:42	
	21:14	20:51	12 06:48 (35)	20:03	19:07	17:14	16:47	
3	05:45	06:14	06:37 (35)	06:49	07:25	07:05	07:43	
	21:14	20:50	10 06:47 (35)	20:01	19:05	17:13	16:47	
4	05:46	06:15	06:38 (35)	06:51	07:26	07:06	07:44	
	21:13	20:49	8 06:46 (35)	19:59	19:04	10 08:06 (37)	17:11	16:46
5	05:46	06:16	06:39 (35)	06:52	07:27	07:53 (37)	07:07	07:45
	21:13	20:48	6 06:45 (35)	19:58	19:02	15 08:08 (37)	17:10	16:46
6	05:47	06:17	06:40 (35)	06:53	07:28	07:51 (37)	07:09	07:46
	21:13	20:46	4 06:44 (35)	19:56	19:00	17 08:08 (37)	17:09	16:46
7	05:48	06:18	06:41 (35)	06:54	07:30	07:51 (37)	07:10	07:47
	21:13	20:45	2 06:43 (35)	19:54	18:56	19 08:10 (37)	17:08	16:46
8	05:48	06:19		06:55	07:31	07:52 (37)	07:11	07:48
	21:12	20:43		19:52	18:55	18 08:10 (37)	17:06	16:46
9	05:49	06:20		06:56	07:32	07:53 (37)	07:13	07:49
	21:12	20:42		19:50	18:53	17 08:10 (37)	17:05	16:46
10	05:50	06:22		06:58	07:33	07:55 (37)	07:14	07:50
	21:11	20:41		19:48	18:51	15 08:10 (37)	17:04	16:46
11	05:51	06:23		06:59	07:35	07:56 (37)	07:15	07:51
	21:11	20:39		19:47	18:49	13 08:09 (37)	17:03	16:46
12	05:52	06:24		07:00	07:36	07:57 (37)	07:17	07:52
	21:10	20:38		19:45	18:47	11 08:08 (37)	17:02	16:46
13	05:52	06:25		07:01	07:37	07:58 (37)	07:18	07:53
	21:10	20:36		19:43	18:46	9 08:07 (37)	17:01	16:46
14	05:53	06:26		07:02	07:38	08:00 (37)	07:19	07:54
	21:09	20:35		19:41	18:44	6 08:06 (37)	17:00	16:46
15	05:54	06:27		07:03	07:40	08:01 (37)	07:21	07:54
	21:09	20:33		19:39	18:42	3 08:04 (37)	16:59	16:46
16	05:55	06:28		07:05	07:41		07:22	07:55
	21:08	20:32		19:37	18:41		16:58	16:46
17	05:56	06:30		07:06	07:42		07:23	07:56
	21:07	20:30		19:35	18:39		16:57	16:47
18	05:57	06:31		07:07	07:43		07:25	07:57
	21:06	20:29		19:34	18:37		16:56	16:47
19	05:58	06:35 (35)	06:32	07:08	07:45		07:26	07:57
	21:06	5 06:40 (35)	20:27	19:32	18:35		16:55	16:47
20	05:59	06:33 (35)	06:33	07:09	07:46		07:27	07:58
	21:05	9 06:42 (35)	20:25	19:30	18:34		16:54	16:48
21	06:00	06:32 (35)	06:34	07:10	07:47		07:29	07:58
	21:04	12 06:44 (35)	20:24	19:28	18:32		16:53	16:48
22	06:01	06:31 (35)	06:35	07:12	07:49		07:30	07:59
	21:03	14 06:45 (35)	20:22	19:26	18:31		16:52	16:49
23	06:02	06:30 (35)	06:37	07:13	07:50		07:31	07:59
	21:02	16 06:46 (35)	20:20	19:24	18:29		16:52	16:49
24	06:03	06:30 (35)	06:38	07:14	07:51		07:32	08:00
	21:01	17 06:47 (35)	20:19	19:22	18:27		16:51	16:50
25	06:04	06:28 (35)	06:39	07:15	07:53		07:34	08:00
	21:00	18 06:46 (35)	20:17	19:20	18:26		16:50	16:50
26	06:05	06:28 (35)	06:40	07:16	07:54		07:35	08:01
	20:59	19 06:47 (35)	20:15	19:18	18:24		16:50	16:51
27	06:06	06:30 (35)	06:41	07:18	07:55		07:36	08:01
	20:58	18 06:48 (35)	20:14	19:17	18:23		16:49	16:52
28	06:07	06:31 (35)	06:42	07:19	07:57		07:37	08:01
	20:57	17 06:48 (35)	20:12	19:15	18:21		16:49	16:52
29	06:08	06:32 (35)	06:44	07:20	07:58		07:39	08:01
	20:56	16 06:48 (35)	20:10	19:13	18:20		16:48	16:53
30	06:09	06:33 (35)	06:45	07:21	07:59		07:40	08:02
	20:55	15 06:48 (35)	20:08	19:11	18:18		16:48	16:54
31	06:10	06:34 (35)	06:46		08:01			08:02
	20:54	14 06:48 (35)	20:07		18:17			16:55
Potential sun hours	471	435		377	341		289	276
Total, worst case	190		55		153			
Sun reduction	0.76		0.74		0.63			
Oper. time red.	0.98		0.98		0.98			
Wind dir. red.	0.55		0.55		0.62			
Total reduction	0.41		0.40		0.39			
Total, real	79		22		59			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H282 - H282

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	07:45	07:04	07:25 (35)	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	
	16:56	17:34	18:11	14 07:39 (35)	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47	
2	08:02	07:44	07:02	07:23 (35)	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42	
	16:57	17:35	18:12	15 07:38 (35)	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	
3	08:02	07:42	07:01	07:21 (35)	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43	
	16:58	17:36	18:14	17 07:38 (35)	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47	
4	08:02	07:41	06:59	07:19 (35)	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44	
	16:59	17:38	18:15	18 07:37 (35)	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46	
5	08:02	07:40	06:57	07:20 (35)	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	
	17:00	17:39	18:16	17 07:37 (35)	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46	
6	08:02	07:39	06:55	07:20 (35)	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:59 (35)	07:09	07:46
	17:01	17:41	18:18	15 07:35 (35)	19:57	20:34	21:06	21:13	20:46	19:56	19:00	8 08:07 (35)	17:09	16:46
7	08:02	07:38	06:53	07:22 (35)	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:57 (35)	07:10	07:47
	17:02	17:42	18:19	11 07:33 (35)	19:58	20:35	21:06	21:13	20:45	19:54	18:56	13 08:10 (35)	17:08	16:46
8	08:01	07:36	07:52	08:26 (35)	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:55 (35)	07:11	07:48
	17:03	17:44	18:20	2 08:28 (35)	19:59	20:36	21:07	21:12	20:44	19:52	18:55	16 08:11 (35)	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	08:08	07:53 (35)	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	18 08:11 (35)	17:05	16:46	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	08:12	07:55 (35)	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17 08:12 (35)	17:04	16:45	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	08:13	07:56 (35)	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	16 08:12 (35)	17:03	16:46	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	08:14	07:57 (35)	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	15 08:12 (35)	17:02	16:46	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	08:10	07:58 (35)	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	13 08:11 (35)	17:01	16:46	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	08:00	08:00 (35)	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	11 08:11 (35)	17:00	16:46	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	08:11	08:11 (35)	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	9 08:10 (35)	16:59	16:46	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	08:02	08:02 (35)	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	6 08:08 (35)	16:58	16:46	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	08:04	08:04 (35)	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	4 08:08 (35)	16:57	16:47	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:25	07:57	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:56	16:47	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:26	07:57	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:55	16:47	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:27	07:58	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:54	16:48	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:29	07:58	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:53	16:48	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:30	07:59	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:52	16:49	16:49
23	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:31	07:59	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:52	16:49	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:32	08:00	08:00
	17:23	18:04	1 07:34 (35)	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50	16:50
25	07:52	07:11	07:31 (35)	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00	08:00
	17:24	18:06	5 07:36 (35)	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	16:50
26	07:51	07:09	07:30 (35)	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01	08:01
	17:25	18:07	7 07:37 (35)	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51	16:51
27	07:50	07:07	07:28 (35)	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01	08:01
	17:27	18:08	10 07:38 (35)	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52	16:52
28	07:49	07:06	07:26 (35)	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01	08:01
	17:28	18:10	12 07:38 (35)	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	07:39	08:01	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:48	16:53	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	07:40	08:02	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:48	16:54	16:54
31	07:46		07:10	06:17	05:45	05:45	06:10	06:46	07:22	08:01	07:41	07:41	08:02	08:02
	17:32		19:49	20:27	21:01	21:14	20:54	20:07	18:17	17:24	16:47	16:47	16:55	16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276		
Total, worst case		35	109							146				
Sun reduction		0.59	0.59							0.63				
Oper. time red.		0.98	0.98							0.98				
Wind dir. red.		0.62	0.62							0.62				
Total reduction		0.36	0.36							0.38				
Total, real		13	39							56				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H283 - H283

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	07:45	08:21 (37)	07:04	07:08	06:17
	16:56	17:34	46 09:07 (37)	18:11	19:51	20:28
2	08:02	07:44	08:21 (37)	07:02	07:06	06:15
	16:57	17:35	45 09:06 (37)	18:12	19:52	20:29
3	08:02	07:42	08:21 (37)	07:00	07:04	06:14
	16:58	17:36	45 09:06 (37)	18:14	19:53	20:30
4	08:02	07:41	08:22 (37)	06:59	07:02	06:13
	16:59	17:38	44 09:06 (37)	18:15	19:54	20:31
5	08:02	07:40	08:22 (37)	06:57	07:00	06:11
	17:00	17:39	44 09:06 (37)	18:16	19:56	20:33
6	08:02	07:39	08:22 (37)	06:55	06:59	06:10
	17:01	9 08:31 (37)	07:39	08:22 (37)	06:59	06:10
	08:40 (37)	17:41	43 09:05 (37)	18:18	19:57	20:34
7	08:02	08:29 (37)	07:37	08:23 (37)	06:53	06:08
	17:02	13 08:42 (37)	17:42	42 09:05 (37)	18:19	19:58
	08:01	08:28 (37)	07:36	08:24 (37)	07:52	06:55
8	17:03	16 08:44 (37)	17:44	41 09:05 (37)	18:20	19:59
	08:01	08:27 (37)	07:35	08:24 (37)	07:50	06:53
	17:04	19 08:46 (37)	17:45	40 09:04 (37)	19:22	20:01
10	08:01	08:26 (37)	07:33	08:25 (37)	07:48	06:51
	17:05	21 08:47 (37)	17:46	38 09:03 (37)	19:23	20:02
11	08:01	08:25 (37)	07:32	08:26 (37)	07:46	06:50
	17:06	24 08:49 (37)	17:48	36 09:02 (37)	19:24	20:03
12	08:00	08:25 (37)	07:31	07:52 (38)	07:44	06:48
	17:07	26 08:51 (37)	17:49	39 09:01 (37)	19:26	20:04
13	08:00	08:24 (37)	07:29	07:50 (38)	07:43	06:46
	17:08	28 08:52 (37)	17:51	39 08:59 (37)	19:27	20:06
14	07:59	08:24 (37)	07:28	07:49 (38)	07:41	06:44
	17:10	30 08:54 (37)	17:52	39 08:58 (37)	19:28	20:07
15	07:59	08:23 (37)	07:26	07:47 (38)	07:39	06:43
	17:11	32 08:55 (37)	17:53	39 08:56 (37)	19:29	20:08
16	07:58	08:22 (37)	07:25	07:46 (38)	07:37	06:41
	17:12	33 08:55 (37)	17:55	35 08:53 (37)	19:31	20:09
17	07:58	08:23 (37)	07:23	07:44 (38)	07:35	06:39
	17:13	34 08:57 (37)	17:56	29 08:49 (37)	19:32	20:10
18	07:57	08:22 (37)	07:22	07:43 (38)	07:34	06:38
	17:15	36 08:58 (37)	17:58	20 08:03 (38)	19:33	20:12
19	07:56	08:21 (37)	07:20	07:41 (38)	07:32	06:36
	17:16	38 08:59 (37)	17:59	22 08:03 (38)	19:34	20:13
20	07:56	08:21 (37)	07:19	07:40 (38)	07:30	06:34
	17:17	38 08:59 (37)	18:00	23 08:03 (38)	19:36	20:14
21	07:55	08:21 (37)	07:17	07:38 (38)	07:28	06:33
	17:19	40 09:01 (37)	18:00	25 08:03 (38)	19:37	20:15
22	07:54	08:21 (37)	07:16	07:37 (38)	07:26	06:31
	17:20	41 09:02 (37)	18:02	25 08:02 (38)	19:38	20:17
23	07:53	08:21 (37)	07:14	07:38 (38)	07:24	06:29
	17:21	41 09:02 (37)	18:03	24 08:02 (38)	19:39	20:18
24	07:53	08:21 (37)	07:12	07:38 (38)	07:22	06:28
	17:23	42 09:03 (37)	18:04	23 08:01 (38)	19:41	20:19
25	07:52	08:20 (37)	07:11	07:38 (38)	07:21	06:26
	17:24	43 09:03 (37)	18:06	22 08:00 (38)	19:42	20:20
26	07:51	08:20 (37)	07:09	07:40 (38)	07:19	06:24
	17:25	44 09:04 (37)	18:07	19 07:59 (38)	19:43	20:22
27	07:50	08:20 (37)	07:07	07:41 (38)	07:17	06:23
	17:27	45 09:05 (37)	18:08	16 07:57 (38)	19:44	20:23
28	07:49	08:20 (37)	07:06	07:43 (38)	07:15	06:21
	17:28	45 09:05 (37)	18:10	11 07:54 (38)	19:46	20:24
29	07:48	08:20 (37)		07:13	06:20	05:46
	17:29	45 09:05 (37)		19:47	20:25	20:59
30	07:47	08:21 (37)		07:11	06:18	05:45
	17:31	45 09:06 (37)		19:48	20:26	21:00
31	07:46	08:21 (37)		07:10		05:45
	17:32	45 09:06 (37)		19:49		21:01
Potential sun hours	287	292	369	403	458	464
Total, worst case	873	914			366	
Sun reduction	0.57	0.59			0.65	
Oper. time red.	0.98	0.98			0.98	
Wind dir. red.	0.69	0.68			0.55	
Total reduction	0.39	0.39			0.36	
Total, real	340	359			130	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H283 - H283

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:35 (36)	06:47	07:22	07:02
	21:14	20:53	14 06:49 (36)	20:05	19:09	17:15
2	05:45	06:12	06:36 (36)	06:48	07:23	07:03
	21:14	20:51	12 06:48 (36)	20:03	19:07	17:14
3	05:45	06:14	06:37 (36)	06:49	07:25	07:05
	21:14	20:50	10 06:47 (36)	20:01	19:05	17:13
4	05:46	06:15	06:38 (36)	06:51	07:26	07:06
	21:13	20:49	8 06:46 (36)	19:59	19:04	17:11
5	05:46	06:16	06:39 (36)	06:52	07:27	07:07
	21:13	20:48	6 06:45 (36)	19:58	19:02	17:10
6	05:47	06:17	06:40 (36)	06:53	07:28	07:09
	21:13	20:46	4 06:44 (36)	19:56	19:00	17:09
7	05:48	06:18	06:41 (36)	06:54	07:30	07:10
	21:13	20:45	1 06:42 (36)	19:54	18:56	17:08
8	05:48	06:19		06:55	07:31	07:11
	21:12	20:43		19:52	18:55	17:06
9	05:49	06:20		06:56	07:32	07:13
	21:12	20:42		19:50	18:53	17:05
10	05:50	06:21		06:58	07:33	07:14
	21:11	20:41		19:48	18:51	17:04
11	05:51	06:23		06:59	07:35	07:15
	21:11	20:39		19:47	18:49	17:03
12	05:52	06:24		07:00	07:36	07:17
	21:10	20:38		19:45	18:47	17:02
13	05:52	06:25		07:01	07:37	07:18
	21:10	20:36		19:43	18:46	17:01
14	05:53	06:26		07:02	07:38	08:15 (38)
	21:09	7 06:32 (36)	06:26	19:41	18:44	14 08:25 (38)
15	05:54	06:27		07:03	07:40	08:13 (38)
	21:09	10 06:41 (36)	20:33	19:39	18:42	17 08:29 (38)
16	05:55	06:28		07:05	07:41	08:11 (38)
	21:08	13 06:43 (36)	20:32	19:37	18:40	20 08:30 (38)
17	05:56	06:29		07:06	07:42	08:10 (38)
	21:07	15 06:44 (36)	20:30	19:35	18:39	23 08:31 (38)
18	05:57	06:28		07:07	07:43	08:09 (38)
	21:06	17 06:45 (36)	20:29	19:33	18:37	24 08:33 (38)
19	05:58	06:28		07:08	07:45	08:08 (38)
	21:06	18 06:46 (36)	20:27	19:32	18:35	25 08:33 (38)
20	05:59	06:27		07:09	07:46	08:08 (38)
	21:05	20 06:47 (36)	20:25	19:30	18:34	26 08:34 (38)
21	06:00	06:27		07:10	07:47	08:09 (38)
	21:04	20 06:47 (36)	20:24	19:28	18:32	24 08:33 (38)
22	06:01	06:27		07:12	07:49	08:10 (38)
	21:03	21 06:48 (36)	20:22	19:26	18:31	23 08:33 (38)
23	06:02	06:25		07:13	07:50	08:12 (38)
	21:02	22 06:47 (36)	20:20	19:24	18:29	21 08:33 (38)
24	06:03	06:26		07:14	07:51	08:13 (38)
	21:01	22 06:48 (36)	20:19	19:22	18:27	19 08:32 (38)
25	06:04	06:27		07:15	07:53	08:15 (38)
	21:00	21 06:48 (36)	20:17	19:20	18:26	32 09:21 (37)
26	06:05	06:28		07:16	07:54	08:16 (38)
	20:59	20 06:48 (36)	20:15	19:18	18:24	36 09:24 (37)
27	06:06	06:29		07:17	07:55	08:17 (38)
	20:58	19 06:48 (36)	20:14	19:17	18:23	38 09:26 (37)
28	06:07	06:31		07:19	07:56	08:19 (38)
	20:57	18 06:49 (36)	20:12	19:15	18:21	39 09:28 (37)
29	06:08	06:32		07:20	07:58	08:20 (38)
	20:56	17 06:49 (36)	20:10	19:13	18:20	39 09:29 (37)
30	06:09	06:33		07:21	07:59	08:22 (38)
	20:55	16 06:49 (36)	20:08	19:11	18:18	38 09:31 (37)
31	06:10	06:34			08:00	08:55 (37)
	20:54	15 06:49 (36)	20:07		18:17	37 09:32 (37)
Potential sun hours	471	435		377	341	289
Total, worst case	311	55		502		1199
Sun reduction	0.76	0.74		0.63		0.50
Oper. time red.	0.98	0.98		0.98		0.98
Wind dir. red.	0.55	0.55		0.66		0.69
Total reduction	0.42	0.40		0.41		0.34
Total, real	129	22		206		409

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H284 - H284

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	08:26 (39)	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	08:16 (39)
2	16:56	15 08:41 (39)	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47	5 08:21 (39)
3	08:02	08:26 (39)	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:42	08:14 (39)
4	16:57	15 08:41 (39)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47	9 08:23 (39)
5	08:02	08:26 (39)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43	08:13 (39)
6	16:58	16 08:42 (39)	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:47	11 08:24 (39)
7	08:02	08:26 (39)	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44	08:14 (39)
8	16:59	16 08:42 (39)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:04	17:11	16:46	13 08:27 (39)
9	08:02	08:26 (39)	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	08:13 (39)
10	17:00	16 08:42 (39)	17:39	18:16	19:56	20:33	21:05	21:13	20:47	19:58	19:02	17:10	16:46	14 08:27 (39)
11	08:02	08:27 (39)	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46	08:13 (39)
12	17:01	15 08:42 (39)	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46	15 08:28 (39)
13	08:02	08:27 (39)	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47	08:13 (39)
14	17:02	14 08:41 (39)	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46	16 08:29 (39)
15	08:01	08:29 (39)	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48	08:14 (39)
16	17:03	13 08:42 (39)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46	16 08:30 (39)
17	08:01	08:30 (39)	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49	08:15 (39)
18	17:04	11 08:41 (39)	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45	16 08:31 (39)
19	08:01	08:31 (39)	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:50	08:16 (39)
20	17:05	9 08:40 (39)	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45	15 08:31 (39)
21	08:01	08:33 (39)	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51	08:17 (39)
22	17:06	6 08:39 (39)	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45	15 08:32 (39)
23	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52	08:17 (39)	
24	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46	15 08:32 (39)	
25	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53	08:18 (39)	
26	17:08	17:51	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46	15 08:33 (39)	
27	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54	08:19 (39)	
28	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46	14 08:33 (39)	
29	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54	08:20 (39)	
30	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46	14 08:34 (39)	
31	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55	08:21 (39)	
32	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46	14 08:35 (39)	
33	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56	08:21 (39)	
34	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46	14 08:35 (39)	
35	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56	08:22 (39)	
36	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47	14 08:36 (39)	
37	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57	08:22 (39)	
38	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47	13 08:35 (39)	
39	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58	08:23 (39)	
40	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48	13 08:36 (39)	
41	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58	08:24 (39)	
42	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48	13 08:37 (39)	
43	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59	08:24 (39)	
44	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:52	16:48	13 08:37 (39)	
45	07:53	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59	08:24 (39)	
46	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49	13 08:37 (39)	
47	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00	08:25 (39)	
48	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50	13 08:38 (39)	
49	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00	08:25 (39)	
50	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50	14 08:39 (39)	
51	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00	08:25 (39)	
52	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51	14 08:39 (39)	
53	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01	08:26 (39)	
54	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52	14 08:40 (39)	
55	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:56	07:37	08:01	08:26 (39)	
56	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52	14 08:40 (39)	
57	07:48	07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01	08:01	08:26 (39)	
58	17:29	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53	14 08:40 (39)		
59	07:47	07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02	08:02	08:26 (39)	
60	17:31	19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54	14 08:40 (39)		
61	07:46	07:09	07:09	05:45	05:45	06:10	06:46	08:00	08:00	08:00	08:02	08:02	08:26 (39)	
62	17:32	19:49	21:01	21:01	20:54	20:54	20:07	18:17	18:17	16:55	16:55	15 08:41 (39)		
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	422	
Total, worst case	146												422	
Sun reduction	0.57												0.49	
Oper. time red.	0.98												0.98	
Wind dir. red.	0.70												0.70	
Total reduction	0.39												0.33	
Total, real	57												141	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H285 - H285

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June								
1	08:02	07:45	16:21 (36)	07:04	17:27 (35)	07:08	07:33 (40)	06:17	05:44	20:27 (23)				
	16:56	17:34	42	17:03 (36)	18:11	22	17:49 (35)	19:51	19	07:52 (40)	20:28	21:02	8	20:35 (23)
2	08:02	07:44	16:20 (36)	07:02	17:28 (35)	07:06	17:28 (35)	07:06	07:35 (40)	06:15	05:43	20:27 (23)		
	16:57	17:35	43	17:03 (36)	18:12	21	17:49 (35)	19:52	15	07:50 (40)	20:29	21:02	9	20:36 (23)
3	08:02	07:42	16:20 (36)	07:00	17:28 (35)	07:04	17:28 (35)	07:04	07:37 (40)	06:14	05:43	20:26 (23)		
	16:58	17:36	43	17:03 (36)	18:14	20	17:48 (35)	19:53	10	07:47 (40)	20:30	21:03	11	20:37 (23)
4	08:02	07:41	16:21 (36)	06:59	17:28 (35)	07:02	17:28 (35)	07:02	06:12	05:43	20:27 (23)			
	16:59	17:38	42	17:03 (36)	18:15	19	17:47 (35)	19:54	20:31	21:04	11	20:38 (23)		
5	08:02	07:40	16:21 (36)	06:57	17:29 (35)	07:00	17:29 (35)	07:00	06:11	05:42	20:27 (23)			
	17:00	17:39	43	17:04 (36)	18:16	16	17:45 (35)	19:56	20:32	21:05	12	20:39 (23)		
6	08:02	07:39	16:21 (36)	06:55	17:31 (35)	06:58	17:31 (35)	06:58	06:10	05:42	20:27 (23)			
	17:01	17:41	42	17:03 (36)	18:18	13	17:44 (35)	19:57	20:34	21:06	12	20:39 (23)		
7	08:02	07:37	16:22 (36)	06:53	17:34 (35)	06:57	17:34 (35)	06:57	06:08	05:41	20:27 (23)			
	17:02	17:42	41	17:03 (36)	18:19	7	17:41 (35)	19:58	20:35	21:06	13	20:40 (23)		
8	08:01	07:36	16:22 (36)	07:52	17:34 (35)	06:55	17:34 (35)	06:55	06:07	05:41	20:27 (23)			
	17:03	17:43	41	17:03 (36)	18:20	19:59	17:34 (35)	19:59	20:36	21:07	14	20:41 (23)		
9	08:01	07:35	16:22 (36)	07:50	17:35 (35)	06:53	17:35 (35)	06:53	06:06	05:41	20:27 (23)			
	17:04	17:45	41	17:03 (36)	19:22	20:01	17:35 (35)	20:01	20:37	21:08	14	20:41 (23)		
10	08:01	07:33	16:23 (36)	07:48	17:36 (35)	06:51	17:36 (35)	06:51	06:04	05:40	20:27 (23)			
	17:05	17:46	40	17:03 (36)	19:23	20:02	17:36 (35)	20:02	20:38	21:08	14	20:41 (23)		
11	08:00	07:32	16:23 (36)	07:46	17:37 (35)	06:50	17:37 (35)	06:50	06:03	05:40	20:28 (23)			
	17:06	17:48	38	17:01 (36)	19:24	20:03	17:37 (35)	20:03	20:40	21:09	14	20:42 (23)		
12	08:00	07:31	16:25 (36)	07:44	17:38 (35)	06:48	17:38 (35)	06:48	06:02	05:40	20:28 (23)			
	17:07	17:49	36	17:01 (36)	19:25	20:04	17:38 (35)	20:04	20:41	21:09	15	20:43 (23)		
13	08:00	07:29	16:25 (36)	07:43	17:39 (35)	06:46	17:39 (35)	06:46	06:01	05:40	20:28 (23)			
	17:08	17:50	35	17:00 (36)	19:27	20:05	17:39 (35)	20:05	20:42	21:10	15	20:43 (23)		
14	07:59	16:34 (36)	07:28	16:27 (36)	07:41	06:44	17:40 (35)	06:44	06:00	05:40	20:28 (23)			
	17:10	16:40 (36)	17:52	16:28 (36)	19:28	20:07	17:40 (35)	20:07	20:43	21:11	16	20:44 (23)		
15	07:59	16:31 (36)	07:26	16:28 (36)	07:39	06:43	17:41 (35)	06:43	05:59	05:40	20:29 (23)			
	17:11	16:43 (36)	17:53	16:29 (36)	19:29	20:08	17:41 (35)	20:08	20:44	21:11	15	20:44 (23)		
16	07:58	16:28 (36)	07:25	16:30 (36)	07:37	06:41	17:42 (35)	06:41	05:57	05:40	20:29 (23)			
	17:12	16:44 (36)	17:55	16:31 (36)	19:31	20:09	17:42 (35)	20:09	20:45	21:11	16	20:45 (23)		
17	07:58	16:28 (36)	07:23	16:31 (36)	07:35	06:39	17:43 (35)	06:39	05:56	05:40	20:29 (23)			
	17:13	16:46 (36)	17:56	16:32 (36)	19:32	20:10	17:43 (35)	20:10	20:46	21:12	16	20:45 (23)		
18	07:57	16:26 (36)	07:22	16:34 (36)	07:33	06:37	17:44 (35)	06:37	05:55	05:40	20:29 (23)			
	17:15	16:47 (36)	17:57	16:35 (36)	19:33	20:12	17:44 (35)	20:12	20:48	21:12	16	20:45 (23)		
19	07:56	16:25 (36)	07:20	16:38 (36)	07:32	06:36	17:45 (35)	06:36	05:54	05:40	20:29 (23)			
	17:16	16:48 (36)	17:59	16:39 (36)	19:34	20:13	17:45 (35)	20:13	20:49	21:13	16	20:45 (23)		
20	07:56	16:24 (36)	07:19	16:40 (36)	07:30	06:34	17:46 (35)	06:34	05:53	05:40	20:29 (23)			
	17:17	16:50 (36)	18:00	16:41 (36)	19:36	4	07:54 (40)	20:14	20:50	21:13	16	20:45 (23)		
21	07:55	16:24 (36)	07:17	17:36 (35)	07:28	06:32	07:54 (40)	06:32	05:52	05:40	20:30 (23)			
	17:18	16:52 (36)	18:00	17:38 (35)	19:37	7	07:55 (40)	20:15	20:51	21:13	16	20:46 (23)		
22	07:54	16:24 (36)	07:15	17:32 (35)	07:26	06:31	07:56 (40)	06:31	05:51	05:41	20:30 (23)			
	17:20	16:53 (36)	18:02	17:39 (35)	19:38	10	07:56 (40)	20:17	20:52	21:13	16	20:46 (23)		
23	07:53	16:23 (36)	07:14	17:31 (35)	07:24	06:29	07:57 (40)	06:29	05:50	05:41	20:30 (23)			
	17:21	16:54 (36)	18:03	17:41 (35)	19:39	12	07:56 (40)	20:18	20:53	21:14	16	20:46 (23)		
24	07:53	16:22 (36)	07:12	17:30 (35)	07:22	06:28	07:57 (40)	06:28	05:50	05:41	20:30 (23)			
	17:23	16:56 (36)	18:04	17:42 (35)	19:41	15	07:57 (40)	20:19	20:54	21:14	16	20:46 (23)		
25	07:52	16:22 (36)	07:11	17:28 (35)	07:21	06:26	07:58 (40)	06:26	05:49	05:41	20:31 (23)			
	17:24	16:57 (36)	18:06	17:43 (35)	19:42	17	07:58 (40)	20:20	20:55	21:14	16	20:47 (23)		
26	07:51	16:21 (36)	07:09	17:28 (35)	07:19	06:24	07:59 (40)	06:24	05:48	05:42	20:31 (23)			
	17:25	16:59 (36)	18:07	17:45 (35)	19:43	18	07:59 (40)	20:21	20:56	21:14	16	20:47 (23)		
27	07:50	16:21 (36)	07:07	17:28 (35)	07:17	06:23	07:59 (40)	06:23	05:47	05:42	20:31 (23)			
	17:27	17:00 (36)	18:08	17:47 (35)	19:44	20	07:57 (40)	20:23	20:57	2	20:31 (23)	21:14	15	20:46 (23)
28	07:49	16:21 (36)	07:06	17:27 (35)	07:15	06:21	07:57 (40)	06:21	05:47	20:29 (23)	05:43	20:32 (23)		
	17:28	17:01 (36)	18:10	17:48 (35)	19:46	21	07:56 (40)	20:24	20:58	4	20:33 (23)	21:14	15	20:47 (23)
29	07:48	16:21 (36)	07:05	17:26 (35)	07:13	06:20	07:56 (40)	06:20	05:46	20:28 (23)	05:43	20:31 (23)		
	17:29	17:01 (36)	18:11	17:49 (35)	19:47	22	07:55 (40)	20:25	20:59	5	20:33 (23)	21:14	15	20:46 (23)
30	07:47	16:21 (36)	07:04	17:25 (35)	07:11	06:18	07:55 (40)	06:18	05:45	20:27 (23)	05:43	20:32 (23)		
	17:31	17:02 (36)	18:12	17:50 (35)	19:48	23	07:54 (40)	20:26	21:00	7	20:34 (23)	21:14	15	20:47 (23)
31	07:46	16:21 (36)	07:03	17:24 (35)	07:09	06:16	07:53 (40)	06:16	05:45	20:27 (23)	05:43	20:32 (23)		
	17:32	17:03 (36)	18:13	17:51 (35)	19:49	21	07:53 (40)	06:15	21:01	8	20:35 (23)	21:14	15	20:47 (23)
Potential sun hours	287	292	369	403	458	464	429							
Total, worst case	519	768	308	44	26	429								
Sun reduction	0.57	0.59	0.59	0.61	0.65	0.70								
Oper. time red.	0.98	0.98	0.98	0.98	0.98	0.98								
Wind dir. red.	0.56	0.56	0.57	0.60	0.68	0.68								
Total reduction	0.31	0.32	0.33	0.35	0.43	0.46								
Total, real	161	246	101	16	11	198								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H285 - H285

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December								
1	05:44	20:32 (23)	06:11	06:47	07:22	07:02	15:52 (36)	07:41						
	21:14	14	20:46 (23)	20:52	20:05	19:09	17:15	39	16:31 (36)	16:47				
2	05:44	20:32 (23)	06:12	06:48	07:23	07:03	15:52 (36)	07:42						
	21:14	15	20:47 (23)	20:51	20:03	19:07	17:14	40	16:32 (36)	16:47				
3	05:45	20:32 (23)	06:13	06:49	07:25	07:04	15:51 (36)	07:43						
	21:14	14	20:46 (23)	20:50	20:01	19:05	17:13	41	16:32 (36)	16:46				
4	05:46	20:33 (23)	06:15	06:51	07:26	07:06	15:51 (36)	07:44						
	21:13	13	20:46 (23)	20:49	19:59	19:04	17:11	42	16:33 (36)	16:46				
5	05:46	20:33 (23)	06:16	06:52	07:27	07:07	15:51 (36)	07:45						
	21:13	13	20:46 (23)	20:47	19:58	19:02	17:10	42	16:33 (36)	16:46				
6	05:47	20:33 (23)	06:17	06:53	07:28	07:09	15:51 (36)	07:46						
	21:13	12	20:45 (23)	20:46	19:56	19:00	17:09	43	16:34 (36)	16:46				
7	05:48	20:33 (23)	06:18	06:54	07:30	07:10	15:51 (36)	07:47						
	21:12	12	20:45 (23)	20:45	19:54	18:56	11	18:19 (35)	17:07	42	16:33 (36)	16:46		
8	05:48	20:34 (23)	06:19	06:55	07:31	07:11	15:51 (36)	07:48						
	21:12	11	20:45 (23)	20:43	19:52	18:54	15	18:21 (35)	17:06	43	16:34 (36)	16:45		
9	05:49	20:34 (23)	06:20	06:56	07:31	07:13	15:51 (36)	07:49						
	21:12	10	20:44 (23)	20:42	19:50	9	07:40 (40)	18:53	17	18:21 (35)	17:05	42	16:33 (36)	16:45
10	05:50	20:34 (23)	06:21	06:57	07:32	07:14	15:52 (36)	07:50						
	21:11	10	20:44 (23)	20:41	19:48	15	07:43 (40)	18:51	20	18:22 (35)	17:04	42	16:34 (36)	16:45
11	05:51	20:35 (23)	06:23	06:59	07:34	07:15	15:52 (36)	07:51						
	21:11	9	20:44 (23)	20:39	19:47	18	07:44 (40)	18:49	21	18:23 (35)	17:03	41	16:33 (36)	16:45
12	05:51	20:36 (23)	06:24	07:00	07:36	07:17	15:52 (36)	07:52						
	21:10	7	20:43 (23)	20:38	19:45	21	07:45 (40)	18:47	22	18:23 (35)	17:02	41	16:33 (36)	16:45
13	05:52	20:35 (23)	06:25	07:01	07:37	07:18	15:53 (36)	07:53						
	21:10	7	20:42 (23)	20:36	19:43	23	07:45 (40)	18:46	22	18:22 (35)	17:00	40	16:33 (36)	16:46
14	05:53	20:36 (23)	06:26	07:02	07:38	07:19	15:53 (36)	07:54						
	21:09	6	20:42 (23)	20:35	19:41	22	07:45 (40)	18:44	20	18:20 (35)	16:59	39	16:32 (36)	16:46
15	05:54	20:37 (23)	06:27	07:03	07:39	07:21	15:54 (36)	07:54						
	21:08	4	20:41 (23)	20:33	19:39	21	07:46 (40)	18:42	18	18:18 (35)	16:58	39	16:33 (36)	16:46
16	05:55	20:38 (23)	06:28	07:04	07:41	07:22	15:54 (36)	07:55						
	21:08	3	20:41 (23)	20:32	19:37	20	07:46 (40)	18:40	16	18:16 (35)	16:57	38	16:32 (36)	16:46
17	05:56	20:39 (23)	06:30	07:06	07:42	07:23	15:56 (36)	07:56						
	21:07	1	20:40 (23)	20:30	19:35	19	07:46 (40)	18:39	14	18:15 (35)	16:56	35	16:31 (36)	16:46
18	05:57	06:31	07:07	07:43	07:25	07:25	15:56 (36)	07:56						
	21:06	06:32	07:08	07:45	07:26	12	18:13 (35)	16:56	34	16:30 (36)	16:47			
19	05:58	06:33	07:09	07:46	07:27	07:27	15:57 (36)	07:57						
	21:06	06:34	07:10	07:47	07:28	9	18:11 (35)	16:55	31	16:28 (36)	16:47			
20	05:59	06:35	07:11	07:48	07:29	07:29	15:59 (36)	07:58						
	21:05	06:36	07:12	07:49	07:30	5	18:10 (35)	16:54	29	16:28 (36)	16:48			
21	06:00	06:37	07:13	07:50	07:31	07:31	15:59 (36)	07:58						
	21:04	06:38	07:14	07:51	07:32	17:07 (36)	07:31	16:02 (36)	28	16:27 (36)	16:48			
22	06:01	06:39	07:15	07:52	07:33	07:33	16:01 (36)	07:59						
	21:03	06:40	07:16	07:53	07:34	18:00 (36)	16:01 (36)	16:48						
23	06:02	06:41	07:17	07:54	07:35	17:07 (36)	16:02 (36)	07:59						
	21:02	06:42	07:18	07:55	07:36	13	17:20 (36)	16:52	24	16:26 (36)	16:49			
24	06:03	06:43	07:19	07:56	07:37	17:03 (36)	07:32	16:03 (36)	08:00					
	21:01	06:44	07:20	07:57	07:38	19	17:22 (36)	16:51	21	16:24 (36)	16:50			
25	06:04	06:45	07:21	07:58	07:39	17:01 (36)	07:34	16:06 (36)	08:00					
	21:00	06:46	07:22	07:59	07:40	24	17:25 (36)	16:50	18	16:24 (36)	16:50			
26	06:05	06:47	07:23	08:00	07:41	17:00 (36)	07:35	16:07 (36)	08:00					
	20:59	06:48	07:24	08:01	07:42	27	17:26 (36)	16:50	16	16:23 (36)	16:51			
27	06:06	06:49	07:25	08:02	07:43	16:57 (36)	07:36	16:10 (36)	08:01					
	20:58	06:50	07:26	08:03	07:44	18:23 (36)	07:37	12	16:22 (36)	16:51				
28	06:07	06:51	07:27	08:04	07:45	16:56 (36)	07:37	16:13 (36)	08:01					
	20:57	06:52	07:28	08:05	07:46	30	17:27 (36)	16:49	6	16:19 (36)	16:52			
29	06:08	06:53	07:29	08:06	07:47	17:29 (36)	07:38	16:19 (36)	08:01					
	20:56	06:54	07:30	08:07	07:48	33	17:29 (36)	16:49	6	16:19 (36)	16:52			
30	06:09	06:55	07:31	08:08	07:49	16:55 (36)	07:38	16:19 (36)	08:01					
	20:55	06:56	07:32	08:09	07:50	35	17:30 (36)	16:48	16:53	08:01				
31	06:10	06:57	07:33	08:10	07:51	16:54 (36)	07:40	16:54	08:01					
	20:54	06:58	07:34	08:11	07:52	37	17:31 (36)	16:48	16:54	08:01				
Potential sun hours	471	435	377	341	289	276								
Total, worst case	161		238	478	934									
Sun reduction	0.76		0.69	0.63	0.50									
Oper. time red.	0.98		0.98	0.98	0.98									
Wind dir. red.	0.68		0.60	0.55	0.56									
Total reduction	0.50		0.40	0.34	0.27									
Total, real	81		95	161	254									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H286 - H286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02	07:45	07:04	07:08	06:17	05:44	06:19 (41)
	16:56	17:34	18:11	19:51	20:28	21:01	8 06:27 (41)
2	08:02	07:43	07:02	07:06	06:15	05:43	06:22 (41)
	16:57	17:35	18:12	19:52	20:29	21:02	4 06:26 (41)
3	08:02	07:42	07:00	07:04	06:14	05:43	
	16:58	17:36	18:14	19:53	20:30	21:03	
4	08:02	07:41	06:59	07:02	06:12	05:43	
	16:59	17:38	18:15	19:54	20:31	21:04	
5	08:02	07:40	06:57	07:00	06:11	05:42	
	17:00	17:39	18:16	19:56	20:32	21:05	
6	08:02	07:39	06:55	06:58	06:10	05:42	
	17:01	17:41	18:18	19:57	20:34	21:05	
7	08:01	07:37	06:53	06:57	06:08	05:41	
	17:02	17:42	18:19	19:58	20:35	21:06	
8	08:01	07:36	07:52	06:55	19:33 (37) 06:07	05:41	
	17:03	17:43	18:20	19:59	4 19:37 (37) 20:36	21:07	
9	08:01	07:35	07:50	06:53	19:31 (37) 06:06	05:41	
	17:04	17:45	19:22	20:00	7 19:38 (37) 20:37	21:08	
10	08:01	07:33	07:48	06:51	19:30 (37) 06:04	06:26 (41) 05:41	
	17:05	17:46	19:23	20:02	9 19:39 (37) 20:38	3 06:29 (41) 21:08	
11	08:00	07:32	07:46	06:50	19:30 (37) 06:03	06:25 (41) 05:40	
	17:06	17:48	19:24	20:03	11 19:41 (37) 20:40	5 06:30 (41) 21:09	
12	08:00	07:31	07:44	06:48	19:30 (37) 06:02	06:24 (41) 05:40	
	17:07	17:49	19:25	20:04	12 19:42 (37) 20:41	7 06:31 (41) 21:09	
13	08:00	07:29	07:43	06:46	19:29 (37) 06:01	06:23 (41) 05:40	
	17:08	17:50	19:27	20:05	14 19:43 (37) 20:42	9 06:32 (41) 21:10	
14	07:59	07:28	07:41	06:44	19:29 (37) 06:00	06:22 (41) 05:40	
	17:10	17:52	19:28	20:07	15 19:44 (37) 20:43	11 06:33 (41) 21:10	
15	07:59	07:26	07:39	06:43	19:30 (37) 05:59	06:20 (41) 05:40	
	17:11	17:53	19:29	20:08	16 19:46 (38) 20:44	12 06:32 (41) 21:11	
16	07:58	07:25	07:37	06:41	19:31 (37) 05:57	06:19 (41) 05:40	
	17:12	17:55	19:31	20:09	16 19:47 (38) 20:45	13 06:32 (41) 21:11	
17	07:58	07:23	07:35	06:39	19:29 (38) 05:56	06:18 (41) 05:40	
	17:13	17:56	19:32	20:10	19 19:48 (38) 20:46	14 06:32 (41) 21:12	
18	07:57	07:22	07:33	06:37	19:29 (38) 05:55	06:17 (41) 05:40	
	17:15	17:57	19:33	20:12	20 19:49 (38) 20:48	16 06:33 (41) 21:12	
19	07:56	07:20	07:32	06:36	19:28 (38) 05:54	06:17 (41) 05:40	
	17:16	17:59	19:34	20:13	22 19:50 (38) 20:49	17 06:34 (41) 21:13	
20	07:56	07:19	07:30	06:34	19:28 (38) 05:53	06:16 (41) 05:40	
	17:17	18:00	19:36	20:14	23 19:51 (38) 20:50	17 06:33 (41) 21:13	
21	07:55	07:17	07:28	06:32	19:28 (38) 05:52	06:15 (41) 05:40	
	17:19	18:00	19:37	20:15	25 19:53 (38) 20:51	18 06:33 (41) 21:13	
22	07:54	07:15	07:26	06:31	19:28 (38) 05:51	06:14 (41) 05:41	
	17:20	18:02	19:38	20:17	24 19:52 (38) 20:52	19 06:33 (41) 21:13	
23	07:53	07:14	07:24	06:29	19:28 (38) 05:51	06:13 (41) 05:41	
	17:21	18:03	19:39	20:18	24 19:52 (38) 20:53	20 06:33 (41) 21:14	
24	07:53	07:12	07:22	06:28	19:28 (38) 05:50	06:12 (41) 05:41	
	17:23	18:04	19:41	20:19	23 19:51 (38) 20:54	20 06:32 (41) 21:14	
25	07:52	07:11	07:20	06:26	19:29 (38) 05:49	06:13 (41) 05:41	
	17:24	18:06	19:42	20:20	22 19:51 (38) 20:55	19 06:32 (41) 21:14	
26	07:51	07:09	07:19	06:24	19:30 (38) 05:48	06:14 (41) 05:42	
	17:25	18:07	19:43	20:21	19 19:49 (38) 20:56	18 06:32 (41) 21:14	
27	07:50	07:07	07:17	06:23	19:31 (38) 05:47	06:14 (41) 05:42	
	17:27	18:08	19:44	20:23	17 19:48 (38) 20:57	17 06:31 (41) 21:14	
28	07:49	07:06	07:15	06:21	19:32 (38) 05:47	06:16 (41) 05:43	
	17:28	18:10	19:46	20:24	14 19:46 (38) 20:58	15 06:31 (41) 21:14	
29	07:48		07:13	06:20	19:35 (38) 05:46	06:16 (41) 05:43	
	17:29		19:47	20:25	9 19:44 (38) 20:59	14 06:30 (41) 21:14	
30	07:47		07:11	06:18	05:45	06:16 (41) 05:43	
	17:31		19:48	20:26	13 21:00	06:29 (41) 21:14	
31	07:46		07:09		05:45	06:18 (41)	
	17:32		19:49		11 21:01	06:29 (41)	
Potential sun hours	287	292	369	403	458	464	
Total, worst case				365	308	12	
Sun reduction				0.61	0.65	0.70	
Oper. time red.				0.98	0.98	0.98	
Wind dir. red.				0.62	0.56	0.56	
Total reduction				0.37	0.35	0.38	
Total, real				135	109	5	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H286 - H286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:35 (41) 20:05	06:47 19:29 (37)	07:22 19:09	07:02 17:15
2	05:45 21:14	06:12 20:51	06:48 20:03	06:48 19:29 (37)	07:23 19:07	07:03 17:14
3	05:45 21:14	06:13 20:50	06:49 20:01	06:49 19:29 (37)	07:25 19:05	07:04 17:13
4	05:46 21:13	06:15 20:49	06:51 19:59	06:51 19:30 (37)	07:26 19:04	07:06 17:11
5	05:46 21:13	06:16 20:47	06:52 19:58	06:52 19:32 (37)	07:27 19:02	07:07 17:10
6	05:47 21:13	06:17 20:46	06:53 19:56	06:53 19:33 (37)	07:28 19:00	07:08 17:09
7	05:48 21:12	06:18 20:45	06:54 19:54	06:54 19:33 (37)	07:29 18:56	07:10 17:07
8	05:48 21:12	06:19 20:43	06:55 19:52	06:55 19:33 (37)	07:31 18:54	07:11 17:06
9	05:49 21:12	06:20 20:42	06:56 19:50	06:56 19:33 (37)	07:32 18:53	07:13 17:05
10	05:50 21:11	06:21 20:41	06:57 19:48	06:57 19:33 (37)	07:33 18:51	07:14 17:04
11	05:51 21:11	06:28 (41) 06:35 (41)	06:23 20:39	06:59 19:46	07:34 18:49	07:15 17:03
12	05:51 21:10	06:27 (41) 06:36 (41)	06:24 20:38	07:00 19:45	07:36 18:47	07:17 17:02
13	05:52 21:10	06:25 (41) 06:37 (41)	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01
14	05:53 21:09	06:25 (41) 06:38 (41)	06:26 20:35	19:42 (38) 19:52 (38)	07:02 19:41	07:19 16:59
15	05:54 21:08	06:24 (41) 06:39 (41)	06:27 20:33	19:39 (38) 19:54 (38)	07:03 19:39	07:21 16:58
16	05:55 21:08	06:24 (41) 06:40 (41)	06:28 20:32	19:37 (38) 19:55 (38)	07:04 19:37	07:22 16:57
17	05:56 21:07	06:23 (41) 06:41 (41)	06:30 20:30	19:36 (38) 19:56 (38)	07:06 19:35	07:23 16:56
18	05:57 21:06	06:23 (41) 06:42 (41)	06:31 20:28	19:35 (38) 19:56 (38)	07:07 19:33	07:25 16:56
19	05:58 21:06	06:23 (41) 06:42 (41)	06:32 20:27	19:34 (38) 19:57 (38)	07:08 19:32	07:26 16:55
20	05:59 21:05	06:23 (41) 06:43 (41)	06:33 20:25	19:33 (38) 19:57 (38)	07:09 19:30	07:27 16:54
21	06:00 21:04	06:23 (41) 06:42 (41)	06:34 20:24	19:33 (38) 19:58 (38)	07:10 19:28	07:28 16:53
22	06:01 21:03	06:24 (41) 06:43 (41)	06:35 20:22	19:33 (38) 19:57 (38)	07:11 19:26	07:30 16:52
23	06:02 21:02	06:25 (41) 06:43 (41)	06:37 20:20	19:32 (38) 19:56 (38)	07:13 19:24	07:31 16:52
24	06:03 21:01	06:26 (41) 06:43 (41)	06:38 20:19	19:32 (38) 19:54 (38)	07:14 19:22	07:32 16:51
25	06:04 21:00	06:27 (41) 06:43 (41)	06:39 20:17	19:32 (38) 19:52 (38)	07:15 19:20	07:33 16:50
26	06:05 20:59	06:28 (41) 06:43 (41)	06:40 20:15	19:32 (38) 19:50 (38)	07:16 19:18	07:35 16:50
27	06:06 20:58	06:29 (41) 06:43 (41)	06:41 20:13	19:32 (37) 19:48 (38)	07:17 19:16	07:36 16:49
28	06:07 20:57	06:30 (41) 06:43 (41)	06:42 20:12	19:31 (37) 19:47 (38)	07:19 19:15	07:37 16:49
29	06:08 20:56	06:31 (41) 06:42 (41)	06:44 20:10	19:30 (37) 19:45 (37)	07:20 19:13	07:38 16:48
30	06:09 20:55	06:32 (41) 06:42 (41)	06:45 20:08	19:30 (37) 19:44 (37)	07:21 19:11	07:40 16:48
31	06:10 20:54	06:34 (41) 06:42 (41)	06:46 20:06	19:29 (37) 19:42 (37)	07:22 19:10	08:02 16:55
Potential sun hours	471	435	377	341	289	276
Total, worst case	308	350	32			
Sun reduction	0.76	0.74	0.69			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.56	0.62	0.62			
Total reduction	0.41	0.45	0.42			
Total, real	128	157	13			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H287 - H287

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June					
1	08:02	07:44	07:04	07:07	18:35 (46)	06:17	19:59 (41)	05:44			
	16:56	17:33	18:11	19:50	36	19:11 (46)	20:27	5	20:04 (41)	21:01	
2	08:02	07:43	07:02	07:06	18:35 (46)	06:15	19:57 (41)	05:43			
	16:57	17:35	18:12	19:52	35	19:10 (46)	20:29	8	20:05 (41)	21:02	
3	08:02	07:42	07:00	07:04	18:35 (46)	06:14	19:56 (41)	05:43			
	16:57	17:36	18:14	19:53	34	19:09 (46)	20:30	10	20:06 (41)	21:03	
4	08:02	07:41	06:59	07:02	18:35 (46)	06:12	19:56 (41)	05:42			
	16:58	17:38	18:15	19:54	33	19:08 (46)	20:31	12	20:08 (41)	21:04	
5	08:02	07:40	06:57	07:00	18:36 (46)	06:11	19:54 (41)	05:42			
	16:59	17:39	18:16	19:55	31	19:07 (46)	20:32	14	20:08 (41)	21:05	
6	08:02	07:39	06:55	06:58	18:37 (46)	06:10	19:54 (41)	05:42			
	17:00	17:41	18:18	19:57	28	19:05 (46)	20:34	16	20:10 (41)	21:05	
7	08:01	07:37	06:53	06:57	18:39 (46)	06:08	19:54 (41)	05:41			
	17:01	17:42	18:19	19:58	25	19:04 (46)	20:35	17	20:11 (41)	21:06	
8	08:01	07:36	07:51	06:55	18:40 (46)	06:07	19:54 (41)	05:41			
	17:03	17:43	18:20	19:59	21	19:01 (46)	20:36	18	20:12 (41)	21:07	
9	08:01	07:35	07:50	06:53	18:42 (46)	06:06	19:54 (41)	05:41			
	17:04	17:45	19:21	20:00	16	18:58 (46)	20:37	19	20:13 (41)	21:07	
10	08:01	07:33	07:48	06:51	18:46 (46)	06:04	19:54 (41)	05:40			
	17:05	17:46	19:23	20:02	8	18:54 (46)	20:38	20	20:14 (41)	21:08	
11	08:00	08:24 (64)	07:32	07:46	06:49	06:03	19:55 (41)	05:40			
	17:06	1	08:25 (64)	17:48	19:24	20:03	20:39	19	20:14 (41)	21:09	
12	08:00	08:23 (64)	07:31	07:44	06:48	06:02	19:55 (41)	05:40			
	17:07	2	08:25 (64)	17:49	19:25	20:04	20:41	19	20:14 (41)	21:09	
13	08:00	08:23 (64)	07:29	07:42	06:46	06:01	19:56 (41)	05:40			
	17:08	4	08:27 (64)	17:50	19:27	20:05	20:42	17	20:13 (41)	21:10	
14	07:59	08:22 (64)	07:28	07:41	06:44	06:00	19:56 (41)	05:40			
	17:09	5	08:27 (64)	17:52	19:28	20:07	20:43	16	20:12 (41)	21:10	
15	07:59	08:22 (64)	07:26	07:39	06:42	05:58	19:57 (41)	05:40			
	17:11	7	08:29 (64)	17:53	19:29	20:08	20:44	14	20:11 (41)	21:11	
16	07:58	08:21 (64)	07:25	07:37	06:41	05:57	19:58 (41)	05:40			
	17:12	8	08:29 (64)	17:55	19:30	20:09	20:45	12	20:10 (41)	21:11	
17	07:57	08:20 (64)	07:23	07:35	18:54 (46)	06:39	05:56	20:00 (41)	05:40		
	17:13	9	08:29 (64)	17:56	19:32	6	19:00 (46)	20:10	8	20:08 (41)	21:12
18	07:57	08:20 (64)	07:22	07:33	18:49 (46)	06:37	05:55	05:40			
	17:14	10	08:30 (64)	17:57	19:33	16	19:05 (46)	20:11	20:47	21:12	
19	07:56	08:19 (64)	07:20	07:31	18:46 (46)	06:36	05:54	05:40			
	17:16	12	08:31 (64)	17:59	19:34	22	19:08 (46)	20:13	20:49	21:12	
20	07:56	08:18 (64)	07:19	07:30	18:44 (46)	06:34	05:53	05:40			
	17:17	13	08:31 (64)	18:00	19:36	25	19:09 (46)	20:14	20:50	21:13	
21	07:55	08:17 (64)	07:17	07:28	18:42 (46)	06:32	05:52	05:40			
	17:18	14	08:31 (64)	18:00	19:37	28	19:10 (46)	20:15	20:51	21:13	
22	07:54	08:17 (64)	07:15	07:26	18:40 (46)	06:31	05:51	05:40			
	17:20	15	08:32 (64)	18:01	19:38	31	19:11 (46)	20:16	20:52	21:13	
23	07:53	08:16 (64)	07:14	07:24	18:39 (46)	06:29	05:50	05:41			
	17:21	15	08:31 (64)	18:03	19:39	33	19:12 (46)	20:18	20:53	21:13	
24	07:52	08:15 (64)	07:12	07:22	18:37 (46)	06:27	05:50	05:41			
	17:22	16	08:31 (64)	18:04	19:41	35	19:12 (46)	20:19	20:54	21:14	
25	07:52	08:16 (64)	07:10	07:20	18:36 (46)	06:26	05:49	05:41			
	17:24	15	08:31 (64)	18:06	19:42	36	19:12 (46)	20:20	20:55	21:14	
26	07:51	08:17 (64)	07:09	07:19	18:36 (46)	06:24	05:48	05:42			
	17:25	13	08:30 (64)	18:07	19:43	37	19:13 (46)	20:21	20:56	21:14	
27	07:50	08:19 (64)	07:07	07:17	18:36 (46)	06:23	05:47	05:42			
	17:27	10	08:29 (64)	18:08	19:44	37	19:13 (46)	20:23	20:57	21:14	
28	07:49	08:21 (64)	07:05	07:15	18:35 (46)	06:21	05:46	05:42			
	17:28	6	08:27 (64)	18:10	19:46	38	19:13 (46)	20:24	20:58	21:14	
29	07:48			07:13	18:35 (46)	06:20	05:46	05:43			
	17:29			19:47	37	19:12 (46)	20:25	20:59	21:14		
30	07:47			07:11	18:34 (46)	06:18	20:01 (41)	05:45			
	17:31			19:48	38	19:12 (46)	20:26	2	20:03 (41)	21:00	
31	07:46			07:09	18:34 (46)	06:17	05:45	05:43			
	17:32			19:49	37	19:11 (46)	20:26	2	20:03 (41)	21:00	
Potential sun hours	287	292	369	403	458	464					
Total, worst case	175		456	269	244						
Sun reduction	0.57		0.59	0.61	0.65						
Oper. time red.	0.98		0.98	0.98	0.98						
Wind dir. red.	0.69		0.58	0.58	0.64						
Total reduction	0.38		0.33	0.35	0.41						
Total, real	67		152	93	100						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H287 - H287

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:11	20:05 (41)	06:47	07:22	07:02	07:41	08:06 (64)	
	21:14	20:52	19 20:24 (41)	20:05	19:09	17:15	16:47	1 08:07 (64)	
2	05:44	06:12	20:05 (41)	06:48	18:45 (46)	07:23	07:03		
	21:14	20:51	20 20:25 (41)	20:03	8 18:53 (46)	19:07	17:14	16:47	
3	05:45	06:13	20:05 (41)	06:49	18:40 (46)	07:25	07:04	07:43	
	21:13	20:50	19 20:24 (41)	20:01	16 18:56 (46)	19:05	17:13	16:46	
4	05:46	06:14	20:04 (41)	06:50	18:37 (46)	07:26	07:06	07:44	
	21:13	20:49	19 20:23 (41)	19:59	21 18:58 (46)	19:03	17:11	16:46	
5	05:46	06:16	20:04 (41)	06:52	18:35 (46)	07:27	07:07	07:45	
	21:13	20:47	18 20:22 (41)	19:57	25 19:00 (46)	19:02	17:10	16:46	
6	05:47	06:17	20:04 (41)	06:53	18:33 (46)	07:28	07:08	07:46	
	21:13	20:46	16 20:20 (41)	19:56	28 19:01 (46)	19:00	17:09	16:46	
7	05:48	06:18	20:04 (41)	06:54	18:31 (46)	07:29	07:10	07:47	
	21:12	20:45	15 20:19 (41)	19:54	31 19:02 (46)	18:56	17:07	16:45	
8	05:48	06:19	20:04 (41)	06:55	18:31 (46)	07:31	07:11	07:48	
	21:12	20:43	14 20:18 (41)	19:52	32 19:03 (46)	18:54	17:06	16:45	
9	05:49	06:20	20:05 (41)	06:56	18:29 (46)	07:32	07:12	07:49	
	21:12	20:42	11 20:16 (41)	19:50	34 19:03 (46)	18:53	17:05	16:45	
10	05:50	06:21	20:05 (41)	06:57	18:28 (46)	07:33	07:14	07:50	
	21:11	20:40	10 20:15 (41)	19:48	35 19:03 (46)	18:51	17:04	16:45	
11	05:51	06:22	20:06 (41)	06:59	18:27 (46)	07:34	07:15	07:51	
	21:11	20:39	7 20:13 (41)	19:46	36 19:03 (46)	18:49	17:03	16:45	
12	05:51	06:24	20:07 (41)	07:00	18:26 (46)	07:36	07:16	07:52	
	21:10	20:38	5 20:12 (41)	19:45	37 19:03 (46)	18:47	17:01	16:45	
13	05:52	06:25	20:10 (41)	07:01	18:25 (46)	07:37	07:18	07:53	
	21:10	20:36	1 20:11 (41)	19:43	38 19:03 (46)	18:45	17:00	16:45	
14	05:53	06:26		07:02	18:25 (46)	07:38	07:19	07:53	
	21:09	20:35		19:41	38 19:03 (46)	18:44	16:59	6 07:59 (64)	16:46
15	05:54	06:27		07:03	18:24 (46)	07:39	07:21	07:52 (64)	07:54
	21:08	20:33		19:39	38 19:02 (46)	18:42	16:58	10 08:02 (64)	16:46
16	05:55	06:28		07:04	18:25 (46)	07:41	07:22	07:50 (64)	07:55
	21:08	20:31		19:37	37 19:02 (46)	18:40	16:57	13 08:03 (64)	16:46
17	05:56	06:29		07:06	18:25 (46)	07:42	07:23	07:49 (64)	07:56
	21:07	20:30		19:35	37 19:02 (46)	18:39	16:56	15 08:04 (64)	16:46
18	05:57	06:31		07:07	18:24 (46)	07:43	07:24	07:49 (64)	07:56
	21:06	20:28		19:33	37 19:01 (46)	18:37	16:55	16 08:05 (64)	16:47
19	05:58	06:32		07:08	18:25 (46)	07:44	07:26	07:50 (64)	07:57
	21:05	20:27		19:31	35 19:00 (46)	18:35	16:55	15 08:05 (64)	16:47
20	05:59	06:33		07:09	18:25 (46)	07:46	07:27	07:52 (64)	07:57
	21:05	20:25		19:30	33 18:58 (46)	18:34	16:54	15 08:07 (64)	16:47
21	06:00	06:34		07:10	18:25 (46)	07:47	07:28	07:53 (64)	07:58
	21:04	20:23		19:28	32 18:57 (46)	18:32	16:53	14 08:07 (64)	16:48
22	06:01	06:35		07:11	18:26 (46)	07:48	07:30	07:54 (64)	07:59
	21:03	20:22		19:26	29 18:55 (46)	18:30	16:52	13 08:07 (64)	16:48
23	06:02	06:36		07:13	18:28 (46)	07:50	07:31	07:56 (64)	07:59
	21:02	20:20		19:24	26 18:54 (46)	18:29	16:51	12 08:08 (64)	16:49
24	06:03	06:38		07:14	18:29 (46)	07:51	07:32	07:57 (64)	08:00
	21:01	20:19		19:22	23 18:52 (46)	18:27	16:51	10 08:07 (64)	16:49
25	06:04	06:39		07:15	18:31 (46)	07:52	07:33	07:58 (64)	08:00
	21:00	20:17		19:20	18 18:49 (46)	18:26	16:50	9 08:07 (64)	16:50
26	06:05	20:12 (41)	06:40	07:16	18:34 (46)	07:54	07:35	08:00 (64)	08:00
	20:59	5 20:17 (41)	20:15	19:18	11 18:45 (46)	18:24	16:50	8 08:08 (64)	16:51
27	06:06	20:09 (41)	06:41	07:17		07:55	07:36	08:01 (64)	08:01
	20:58	10 20:19 (41)	20:13	19:16		18:23	16:49	7 08:08 (64)	16:51
28	06:07	20:08 (41)	06:42	07:18		07:56	07:37	08:02 (64)	08:01
	20:57	13 20:21 (41)	20:12	19:15		18:21	16:48	5 08:07 (64)	16:52
29	06:08	20:07 (41)	06:43	07:20		07:58	07:38	08:03 (64)	08:01
	20:56	15 20:22 (41)	20:10	19:13		18:20	16:48	4 08:07 (64)	16:53
30	06:09	20:06 (41)	06:45	07:21		07:59	07:39	08:05 (64)	08:01
	20:55	17 20:23 (41)	20:08	19:11		18:18	16:47	2 08:07 (64)	16:54
31	06:10	20:05 (41)	06:46			08:00		08:01	
	20:54	18 20:23 (41)	20:06			18:17		16:55	
Potential sun hours	471	435	377	341	289	276			
Total, worst case	78	174	735		174			1	
Sun reduction	0.76	0.74	0.69		0.50			0.49	
Oper. time red.	0.98	0.98	0.98		0.98			0.98	
Wind dir. red.	0.64	0.64	0.58		0.69			0.69	
Total reduction	0.48	0.46	0.39		0.34			0.33	
Total, real	37	81	287		59			0	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H288 - H288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:33	07:04 18:11	07:08 19:51	07:31 (42) 19:09 (40)	06:17 20:28
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	07:29 (42) 08:04 (42)	06:15 20:29
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 19:53	07:28 (42) 08:05 (42)	06:14 20:30
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 19:54	07:27 (42) 08:05 (42)	06:12 20:31
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:55	07:26 (42) 08:05 (42)	06:11 20:32
6	08:02 17:00	07:39 17:41	06:55 18:18	06:58 19:57	07:25 (42) 08:05 (42)	06:10 20:34
7	08:01 17:01	07:37 17:42	06:53 18:19	06:57 19:58	07:25 (42) 08:06 (42)	06:08 20:35
8	08:01 17:03	07:36 17:43	06:52 18:20	06:55 19:59	07:24 (42) 08:05 (42)	06:07 20:36
9	08:01 17:04	07:35 17:45	06:50 19:21	06:53 20:00	07:24 (42) 08:05 (42)	06:06 20:37
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	07:23 (42) 08:04 (42)	06:04 20:38
11	08:00 17:06	07:32 17:48	07:46 19:24	06:49 20:03	07:24 (42) 08:04 (42)	06:03 20:40
12	08:00 17:07	07:31 17:49	07:44 19:25	06:48 20:04	07:24 (42) 08:03 (42)	06:02 20:41
13	08:00 17:08	07:29 17:50	07:43 19:27	06:46 20:05	07:24 (42) 08:02 (42)	06:01 20:42
14	07:59 17:09	07:28 17:52	07:41 19:28	06:44 20:07	07:24 (42) 08:01 (42)	06:00 20:43
15	07:59 17:11	07:26 17:53	07:39 19:29	06:42 20:08	07:25 (42) 08:01 (42)	05:58 20:44
16	07:58 17:12	07:25 17:55	07:37 19:30	06:41 20:09	07:25 (42) 08:00 (42)	05:57 20:45
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	07:25 (42) 07:58 (42)	05:56 20:46
18	07:57 17:14	07:22 17:57	07:33 19:33	06:37 20:12	07:27 (42) 07:57 (42)	05:55 20:47
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	07:27 (42) 07:55 (42)	05:54 20:49
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	07:28 (42) 07:53 (42)	05:53 20:50
21	07:55 17:18	07:17 18:00	07:28 19:37	06:32 20:15	07:31 (42) 07:51 (42)	05:52 20:51
22	07:54 17:20	07:15 18:01	07:26 19:38	06:31 20:16	07:33 (42) 07:48 (42)	05:51 20:52
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	07:38 (42) 07:43 (42)	05:50 20:53
24	07:52 17:22	07:12 18:04	07:22 19:41	06:27 20:19	05:50 20:54	06:13 (28) 21:14
25	07:52 17:24	07:10 18:06	07:20 19:42	06:26 20:20	05:49 20:55	06:12 (28) 21:14
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:21	05:48 20:56	06:11 (28) 21:14
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	05:47 20:57	06:18 (28) 21:14
28	07:49 17:28	07:05 18:10	07:15 19:46	06:21 20:24	05:46 20:58	06:10 (28) 21:14
29	07:48 17:29		07:13 19:47	06:20 20:25	05:46 20:59	06:09 (28) 21:14
30	07:47 17:31		07:11 19:48	06:18 20:26	05:45 21:00	06:09 (28) 21:14
31	07:46 17:32		07:09 19:49	06:18 20:26	05:45 21:01	06:08 (28) 21:14
Potential sun hours	287	292	369	403	458	464
Total, worst case			549	778	69	570
Sun reduction			0.59	0.61	0.65	0.70
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.59	0.59	0.56	0.56
Total reduction			0.34	0.35	0.36	0.38
Total, real			186	272	25	219

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H288 - H288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:08 (28)	06:11	06:47	07:23 (42)	07:22	07:02	07:41	
	21:14	19 06:27 (28)	20:52	20:05	40 08:03 (42)	19:09	17:15	16:47	
2	05:44	06:09 (28)	06:12	06:48	07:22 (42)	07:23	07:03	07:42	
	21:14	19 06:28 (28)	20:51	20:03	41 08:03 (42)	19:07	17:14	16:47	
3	05:45	06:09 (28)	06:13	06:49	07:22 (42)	07:25	07:04	07:43	
	21:14	19 06:28 (28)	20:50	20:01	41 08:03 (42)	19:05	17:13	16:46	
4	05:46	06:10 (28)	06:14	06:50	07:21 (42)	07:26	07:06	07:44	
	21:13	18 06:28 (28)	20:49	19:59	41 08:02 (42)	19:03	17:11	16:46	
5	05:46	06:11 (28)	06:16	06:52	07:21 (42)	07:27	07:07	07:45	
	21:13	18 06:29 (28)	20:47	19:57	41 08:02 (42)	19:02	17:10	16:46	
6	05:47	06:11 (28)	06:17	06:53	07:21 (42)	07:28	07:08	07:46	
	21:13	17 06:28 (28)	20:46	19:56	40 08:01 (42)	19:00	17:09	16:46	
7	05:48	06:12 (28)	06:18	06:54	07:21 (42)	07:29	07:10	07:47	
	21:12	17 06:29 (28)	20:45	19:54	39 08:00 (42)	18:56	17:07	16:45	
8	05:48	06:13 (28)	06:19	06:55	07:22 (42)	07:31	07:11	07:48	
	21:12	16 06:29 (28)	20:43	19:52	38 08:00 (42)	18:54	17:06	16:45	
9	05:49	06:13 (28)	06:20	06:56	07:22 (42)	07:32	07:13	07:49	
	21:12	15 06:28 (28)	20:42	19:50	37 07:59 (42)	18:53	17:05	16:45	
10	05:50	06:14 (28)	06:21	06:57	07:22 (42)	07:33	07:14	07:50	
	21:11	15 06:29 (28)	20:41	19:48	36 07:58 (42)	18:51	17:04	16:45	
11	05:51	06:15 (28)	06:22	06:59	07:23 (42)	07:34	07:15	07:51	
	21:11	14 06:29 (28)	20:39	19:46	42 19:00 (40)	18:49	17:03	16:45	
12	05:51	06:16 (28)	06:24	07:00	07:24 (42)	07:36	07:17	07:52	
	21:10	13 06:29 (28)	20:38	19:45	45 19:03 (40)	18:47	17:01	16:45	
13	05:52	06:16 (28)	06:25	07:01	07:25 (42)	07:37	07:18	07:53	
	21:10	12 06:28 (28)	20:36	19:43	47 19:04 (40)	18:45	17:00	16:45	
14	05:53	06:17 (28)	06:26	07:02	07:26 (42)	07:38	07:19	07:53	
	21:09	11 06:28 (28)	20:35	19:41	46 19:05 (40)	18:44	16:59	16:46	
15	05:54	06:18 (28)	06:27	07:03	07:28 (42)	07:39	07:21	07:54	
	21:08	10 06:28 (28)	20:33	19:39	42 19:05 (40)	18:42	16:58	16:46	
16	05:55	06:19 (28)	06:28	07:04	07:32 (42)	07:41	07:22	07:55	
	21:08	9 06:28 (28)	20:32	19:37	37 19:07 (40)	18:40	16:57	16:46	
17	05:56	06:20 (28)	06:29	07:06	07:34 (42)	07:42	07:23	07:56	
	21:07	7 06:27 (28)	20:30	19:35	27 19:07 (40)	18:39	16:56	16:46	
18	05:57	06:21 (28)	06:31	07:07	07:34 (43)	07:43	07:25	07:56	
	21:06	6 06:27 (28)	20:28	19:33	37 19:07 (40)	18:37	16:55	16:47	
19	05:58	06:22 (28)	06:32	07:08	07:32 (43)	07:45	07:26	07:57	
	21:05	4 06:26 (28)	20:27	19:31	40 19:06 (40)	18:35	16:55	16:47	
20	05:59	06:22 (28)	06:33	07:09	07:30 (43)	07:46	07:27	07:58	
	21:05	2 06:24 (28)	20:25	7 07:49 (42)	19:30	43 19:05 (40)	18:34	16:54	16:47
21	06:00		06:34	07:37 (42)	07:10	07:31 (43)	07:47	07:28	07:58
	21:04		20:24	16 07:53 (42)	19:28	40 19:03 (40)	18:32	16:53	16:48
22	06:01		06:35	07:35 (42)	07:11	07:32 (43)	07:48	07:30	07:59
	21:03		20:22	21 07:56 (42)	19:26	36 19:00 (40)	18:30	16:52	16:48
23	06:02		06:36	07:33 (42)	07:13	07:34 (43)	07:50	07:31	07:59
	21:02		20:20	25 07:58 (42)	19:24	33 18:59 (40)	18:29	16:51	16:49
24	06:03		06:38	07:31 (42)	07:14	07:35 (43)	07:51	07:32	08:00
	21:01		20:19	28 07:59 (42)	19:22	29 18:57 (40)	18:27	16:51	16:49
25	06:04		06:39	07:29 (42)	07:15	07:36 (43)	07:52	07:34	08:00
	21:00		20:17	31 08:00 (42)	19:20	24 18:55 (40)	18:26	16:50	16:50
26	06:05		06:40	07:28 (42)	07:16	07:37 (43)	07:54	07:35	08:00
	20:59		20:15	33 08:01 (42)	19:18	19 18:53 (40)	18:24	16:50	16:51
27	06:06		06:41	07:27 (42)	07:17	07:38 (43)	07:55	07:36	08:01
	20:58		20:13	34 08:01 (42)	19:16	13 18:51 (40)	18:23	16:49	16:51
28	06:07		06:42	07:25 (42)	07:19	07:40 (43)	07:56	07:37	08:01
	20:57		20:12	37 08:02 (42)	19:15	3 18:50 (40)	18:21	16:48	16:52
29	06:08		06:43	07:24 (42)	07:20		07:58	07:38	08:01
	20:56		20:10	38 08:02 (42)	19:13		18:20	16:48	16:53
30	06:09		06:45	07:23 (42)	07:21		07:59	07:40	08:01
	20:55		20:08	39 08:02 (42)	19:11		18:18	16:47	16:54
31	06:10		06:46	07:24 (42)			08:00		08:02
	20:54		20:06	39 08:03 (42)			18:17		16:55
Potential sun hours	471	435		377		341	289		276
Total, worst case	261		348		997				
Sun reduction	0.76		0.74		0.69				
Oper. time red.	0.98		0.98		0.98				
Wind dir. red.	0.56		0.59		0.59				
Total reduction	0.42		0.42		0.40				
Total, real	109		147		394				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H289 - H289

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June						
1	08:02	16:10 (61)	07:44	07:04	07:07	07:38 (50)	06:17	06:41 (52)	05:44			
	16:56	17	16:27 (61)	17:33	18:11	19:50	37	08:15 (50)	20:27	13	06:54 (52)	21:01
2	08:02	16:11 (61)	07:43	07:02	07:06	07:39 (50)	06:15	06:41 (52)	05:43			
	16:56	17	16:28 (61)	17:35	18:12	19:52	36	08:15 (50)	20:29	11	06:52 (52)	21:02
3	08:02	16:11 (61)	07:42	07:00	07:04	07:39 (50)	06:14	06:44 (52)	05:43			
	16:57	18	16:29 (61)	17:36	18:14	19:53	35	08:14 (50)	20:30	6	06:50 (52)	21:03
4	08:02	16:11 (61)	07:41	06:58	07:02	07:39 (50)	06:12	05:42				
	16:58	19	16:30 (61)	17:38	18:15	19:54	34	08:13 (50)	20:31			21:04
5	08:02	16:12 (61)	07:40	06:57	07:00	07:39 (50)	06:11	05:42				
	16:59	20	16:32 (61)	17:39	18:16	19:55	33	08:12 (50)	20:32			21:05
6	08:01	16:11 (61)	07:38	06:55	06:58	07:40 (50)	06:10	05:42				
	17:00	21	16:32 (61)	17:40	18:17	19:57	30	08:10 (50)	20:33			21:05
7	08:01	16:12 (61)	07:37	06:53	06:57	07:42 (50)	06:08	05:41				
	17:01	21	16:33 (61)	17:42	18:19	19:58	27	08:09 (50)	20:35			21:06
8	08:01	16:12 (61)	07:36	07:51	06:55	07:43 (50)	06:07	05:41				
	17:02	23	16:35 (61)	17:43	18:20	19:59	24	08:07 (50)	20:36			21:07
9	08:01	16:13 (61)	07:35	07:50	06:53	07:44 (50)	06:06	05:41				
	17:04	23	16:36 (61)	17:45	19:21	20:00	20	08:04 (50)	20:37			21:07
10	08:01	16:12 (61)	07:33	07:48	06:51	07:47 (50)	06:04	05:40				
	17:05	25	16:37 (61)	17:46	19:23	20:02	14	08:01 (50)	20:38			21:08
11	08:00	16:13 (61)	07:32	07:46	06:49	06:03	05:40					
	17:06	25	16:38 (61)	17:48	19:24	20:03		20:39	21:09			
12	08:00	16:13 (61)	07:30	07:44	06:48	06:02	05:40					
	17:07	25	16:38 (61)	17:49	19:25	20:04		20:41	21:09			
13	07:59	16:14 (61)	07:29	07:42	06:46	07:06 (51)	06:01	05:40				
	17:08	25	16:39 (61)	17:50	19:27	20:05	7	07:13 (51)	20:42			21:10
14	07:59	16:14 (61)	07:28	07:41	06:44	07:04 (51)	05:59	05:40				
	17:09	24	16:38 (61)	17:52	19:28	20:06	10	07:14 (51)	20:43			21:10
15	07:59	16:15 (61)	07:26	07:39	06:42	07:03 (51)	05:58	05:40				
	17:11	24	16:39 (61)	17:53	19:29	20:08	13	07:16 (51)	20:44			21:11
16	07:58	16:15 (61)	07:25	07:37	06:41	07:01 (51)	05:57	05:40				
	17:12	24	16:39 (61)	17:54	19:30	20:09	16	07:17 (51)	20:45			21:11
17	07:57	16:15 (61)	07:23	07:35	06:39	06:59 (51)	05:56	05:40				
	17:13	24	16:39 (61)	17:56	19:32	20:10	18	07:17 (51)	20:46			21:12
18	07:57	16:17 (61)	07:22	07:33	07:54 (50)	06:37	06:58 (51)	05:55	05:40			
	17:14	23	16:40 (61)	17:57	19:33	20:11	20	07:18 (51)	20:47			21:12
19	07:56	16:17 (61)	07:20	07:31	07:52 (50)	06:36	06:56 (51)	05:54	05:40			
	17:16	22	16:39 (61)	17:59	19:34	20:13	22	07:18 (51)	20:48			21:12
20	07:55	16:18 (61)	07:18	07:30	07:50 (50)	06:34	06:54 (51)	05:53	05:40			
	17:17	21	16:39 (61)	18:00	19:35	20:14	23	07:17 (51)	20:50			21:13
21	07:55	16:18 (61)	07:17	07:28	07:48 (50)	06:32	06:53 (51)	05:52	05:40			
	17:18	20	16:38 (61)	18:00	19:37	20:15	25	07:18 (51)	20:51			21:13
22	07:54	16:20 (61)	07:15	07:26	07:46 (50)	06:31	06:51 (51)	05:51	05:40			
	17:20	19	16:39 (61)	18:01	19:38	20:16	26	07:17 (51)	20:52			21:13
23	07:53	16:21 (61)	07:14	07:24	07:44 (50)	06:29	06:50 (52)	05:50	05:41			
	17:21	17	16:38 (61)	18:03	19:39	20:18	27	07:17 (51)	20:53			21:13
24	07:52	16:23 (61)	07:12	07:22	07:42 (50)	06:27	06:48 (52)	05:49	05:41			
	17:22	14	16:37 (61)	18:04	19:40	20:19	28	07:16 (51)	20:54			21:14
25	07:51	16:25 (61)	07:10	07:20	07:41 (50)	06:26	06:46 (52)	05:49	05:41			
	17:24	11	16:36 (61)	18:05	19:42	20:20	29	07:15 (51)	20:55			21:14
26	07:51	16:28 (61)	07:09	07:18	07:41 (50)	06:24	06:45 (52)	05:48	05:42			
	17:25	5	16:33 (61)	18:07	19:43	20:21	29	07:14 (51)	20:56			21:14
27	07:50		07:07	07:17	07:40 (50)	06:23	06:43 (52)	05:47	05:42			
	17:26		18:08	19:44	38	08:18 (50)	20:22	30	07:13 (51)	20:57		21:14
28	07:49		07:05	07:15	07:39 (50)	06:21	06:42 (52)	05:46	05:42			
	17:28		18:10	19:45	39	08:18 (50)	20:24	30	07:12 (51)	20:58		21:14
29	07:48			07:13	07:39 (50)	06:20	06:40 (52)	05:46	05:43			
	17:29			19:47	38	08:17 (50)	20:25	28	07:09 (51)	20:59		21:14
30	07:47			07:11	07:38 (50)	06:18	06:40 (52)	05:45	05:43			
	17:31			19:48	39	08:17 (50)	20:26	23	07:07 (51)	21:00		21:14
31	07:46			07:09	07:38 (50)		05:44					
	17:32			19:49	38	08:16 (50)			21:00			
Potential sun hours	287		292	369		403		458				464
Total, worst case		527			448		694		30			
Sun reduction		0.57			0.59		0.61		0.65			
Oper. time red.		0.98			0.98		0.98		0.98			
Wind dir. red.		0.56			0.60		0.57		0.54			
Total reduction		0.31			0.35		0.34		0.34			
Total, real		164			155		234		10			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H289 - H289

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:44	06:11	06:47	07:22	07:02	07:41	15:55 (61)
	21:14	20:52	20:05	19:09	17:15	16:47	25 16:20 (61)
2	05:44	06:12	06:48	07:46 (50)	07:23	07:03	07:42 15:55 (61)
	21:14	20:51	20:03	14 08:00 (50)	19:07	17:14	16:47 25 16:20 (61)
3	05:45	06:13	06:49	07:42 (50)	07:24	07:04	07:43 15:56 (61)
	21:13	20:50	20:01	20 08:02 (50)	19:05	17:12	16:46 23 16:19 (61)
4	05:46	06:14	06:50	07:40 (50)	07:26	07:06	07:44 15:56 (61)
	21:13	20:49	19:59	24 08:04 (50)	19:03	17:11	16:46 23 16:19 (61)
5	05:46	06:16	06:51	07:38 (50)	07:27	07:07	07:45 15:57 (61)
	21:13	20:47	19:57	27 08:05 (50)	19:02	17:10	16:46 21 16:18 (61)
6	05:47	06:17	06:53	07:36 (50)	07:28	07:08	07:46 15:57 (61)
	21:13	20:46	19:56	30 08:06 (50)	19:00	17:09	16:46 21 16:18 (61)
7	05:47	06:18	06:54	07:35 (50)	07:29	07:10	07:47 15:58 (61)
	21:12	20:45	19:54	32 08:07 (50)	18:56	17:07	16:45 20 16:18 (61)
8	05:48	06:19	06:55	07:33 (50)	07:31	07:11	07:48 15:58 (61)
	21:12	20:43	19:52	34 08:07 (50)	18:54	17:06	16:45 19 16:17 (61)
9	05:49	06:20	06:56	07:32 (50)	07:32	07:12	07:49 15:59 (61)
	21:11	20:42	19:50	35 08:08 (50)	18:52	17:05	16:45 18 16:17 (61)
10	05:50	06:21	06:52 (52)	06:57	07:32 (50)	07:33	07:14 16:00 (61)
	21:11	20:40	8 07:00 (52)	19:48	36 08:08 (50)	18:51	17:04 16:45 17 16:17 (61)
11	05:50	06:22	06:50 (52)	06:58	07:31 (50)	07:34	07:15 16:00 (61)
	21:11	20:39	11 07:01 (52)	19:46	37 08:08 (50)	18:49	17:03 16:45 17 16:17 (61)
12	05:51	06:24	06:48 (52)	07:00	07:30 (50)	07:36	07:16 16:01 (61)
	21:10	20:37	14 07:02 (52)	19:44	38 08:08 (50)	18:47	17:01 16:45 17 16:18 (61)
13	05:52	06:25	06:47 (52)	07:01	07:30 (50)	07:37	07:18 16:02 (61)
	21:09	20:36	26 07:15 (51)	19:43	38 08:08 (50)	18:45	17:00 16:45 16 16:18 (61)
14	05:53	06:26	06:49 (52)	07:02	07:29 (50)	07:38	07:19 16:03 (61)
	21:09	20:34	29 07:18 (51)	19:41	39 08:08 (50)	18:44	16:59 16:46 15 16:18 (61)
15	05:54	06:27	06:50 (52)	07:03	07:29 (50)	07:39	07:20 16:04 (61)
	21:08	20:33	30 07:20 (51)	19:39	38 08:07 (50)	18:42	16:58 16:46 14 16:18 (61)
16	05:55	06:28	06:51 (52)	07:04	07:28 (50)	07:41	07:22 16:05 (61)
	21:08	20:31	30 07:21 (51)	19:37	38 08:06 (50)	18:40	16:57 5 16:06 (61) 16:46 14 16:18 (61)
17	05:56	06:29	06:52 (52)	07:05	07:29 (50)	07:42	07:23 15:58 (61) 07:56 16:05 (61)
	21:07	20:30	29 07:21 (51)	19:35	37 08:06 (50)	18:39	16:56 11 16:09 (61) 16:46 13 16:18 (61)
18	05:57	06:31	06:53 (52)	07:07	07:29 (50)	07:43	07:24 15:57 (61) 07:56 16:05 (61)
	21:06	20:28	29 07:22 (51)	19:33	37 08:06 (50)	18:37	16:55 14 16:11 (61) 16:47 14 16:19 (61)
19	05:58	06:32	06:54 (52)	07:08	07:29 (50)	07:44	07:26 15:55 (61) 07:57 16:05 (61)
	21:05	20:27	28 07:22 (51)	19:31	35 08:04 (50)	18:35	16:55 17 16:12 (61) 16:47 14 16:19 (61)
20	05:58	06:33	06:55 (52)	07:09	07:30 (50)	07:46	07:27 15:55 (61) 07:57 16:06 (61)
	21:05	20:25	27 07:22 (51)	19:29	33 08:03 (50)	18:34	16:54 19 16:14 (61) 16:47 14 16:20 (61)
21	05:59	06:34	06:56 (51)	07:10	07:31 (50)	07:47	07:28 15:54 (61) 07:58 16:06 (61)
	21:04	20:23	26 07:22 (51)	19:28	31 08:02 (50)	18:32	16:53 20 16:14 (61) 16:48 13 16:19 (61)
22	06:00	06:35	06:57 (51)	07:11	07:32 (50)	07:48	07:30 15:54 (61) 07:59 16:07 (61)
	21:03	20:22	24 07:21 (51)	19:26	28 08:00 (50)	18:30	16:52 21 16:15 (61) 16:48 13 16:20 (61)
23	06:01	06:36	06:59 (51)	07:12	07:34 (50)	07:50	07:31 15:54 (61) 07:59 16:07 (61)
	21:02	20:20	23 07:22 (51)	19:24	25 07:59 (50)	18:29	16:51 22 16:16 (61) 16:49 14 16:21 (61)
24	06:02	06:38	07:00 (51)	07:14	07:35 (50)	07:51	07:32 15:54 (61) 07:59 16:08 (61)
	21:01	20:18	21 07:21 (51)	19:22	21 07:56 (50)	18:27	16:51 23 16:17 (61) 16:49 14 16:22 (61)
25	06:03	06:39	07:01 (51)	07:15	07:36 (50)	07:52	07:33 15:53 (61) 08:00 16:08 (61)
	21:00	20:17	20 07:21 (51)	19:20	17 07:53 (50)	18:26	16:50 24 16:17 (61) 16:50 14 16:22 (61)
26	06:05	06:40	07:02 (51)	07:16	07:40 (50)	07:54	07:35 15:54 (61) 08:00 16:08 (61)
	20:59	20:15	18 07:20 (51)	19:18	8 07:48 (50)	18:24	16:49 24 16:18 (61) 16:51 14 16:22 (61)
27	06:06	06:41	07:03 (51)	07:17	07:55	07:36	15:54 (61) 08:01 16:09 (61)
	20:58	20:13	15 07:18 (51)	19:16	18:22	16:49	24 16:18 (61) 16:51 14 16:23 (61)
28	06:07	06:42	07:04 (51)	07:18	07:56	07:37	15:54 (61) 08:01 16:10 (61)
	20:57	20:12	13 07:17 (51)	19:14	18:21	16:48	24 16:18 (61) 16:52 14 16:24 (61)
29	06:08	06:43	07:05 (51)	07:20	07:58	07:38	15:54 (61) 08:01 16:10 (61)
	20:56	20:10	10 07:15 (51)	19:13	18:20	16:48	25 16:19 (61) 16:53 15 16:25 (61)
30	06:09	06:45	07:06 (51)	07:21	07:59	07:39	15:55 (61) 08:01 16:10 (61)
	20:55	20:08	6 07:12 (51)	19:11	18:18	16:47	25 16:20 (61) 16:54 15 16:25 (61)
31	06:10	06:46			08:00		08:01 16:10 (61)
	20:53	20:06			18:17		16:54 16 16:26 (61)
Potential sun hours	471	435	377	341	289	276	516
Total, worst case		437	752		298		0.49
Sun reduction		0.74	0.69		0.50		0.98
Oper. time red.		0.98	0.98		0.98		0.56
Wind dir. red.		0.54	0.60		0.56		0.27
Total reduction		0.39	0.41		0.27		138
Total, real		171	305		81		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H292 - H292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01 16:55	07:44 17:33	07:04 18:11	07:07 19:50	06:17 20:27	05:44 21:01
2	08:02 16:56	07:43 17:35	07:02 18:12	07:05 19:52	06:15 20:29	05:43 21:02
3	08:02 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03
4	08:02 16:58	07:41 17:38	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:57	06:09 20:33	05:41 21:05
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:35	05:41 21:06
8	08:01 17:02	07:36 17:43	06:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07
9	08:01 17:04	07:34 17:45	06:50 19:21	06:53 20:00	06:06 20:37	05:40 21:07
10	08:00 17:05	07:33 17:46	06:48 19:23	06:51 20:01	06:04 20:38	05:40 21:08
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:09
12	08:00 17:07	07:30 17:49	06:44 19:25	06:48 20:04	19:40 (51) 19:42 (51)	06:02 20:40
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	19:36 (51) 19:43 (51)	06:01 20:42
14	07:59 17:09	07:27 17:52	06:40 19:28	06:44 20:06	19:34 (51) 19:44 (51)	05:59 20:43
15	07:58 17:11	07:26 17:53	06:39 19:29	06:42 20:08	19:33 (51) 19:46 (51)	05:58 20:44
16	07:58 17:12	07:25 17:54	06:37 19:30	06:41 20:09	19:32 (51) 19:47 (51)	05:57 20:45
17	07:57 17:13	07:23 17:56	06:35 19:32	06:39 20:10	19:31 (51) 19:48 (51)	05:56 20:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	19:31 (51) 19:49 (51)	05:55 20:47
19	07:56 17:16	07:20 17:59	06:31 19:34	06:35 20:13	19:30 (51) 19:50 (51)	05:54 20:48
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 19:13 (50) 19:14 (50)	19:29 (51) 19:51 (51)	05:53 20:49
21	07:55 17:18	07:17 18:00	06:28 19:37	06:32 19:11 (50) 19:16 (50)	19:29 (51) 19:53 (51)	05:52 20:51
22	07:54 17:20	07:15 18:01	06:26 19:38	06:31 19:10 (50) 19:17 (50)	19:29 (51) 19:53 (51)	05:51 20:52
23	07:53 17:21	07:14 18:03	06:24 19:39	06:29 19:09 (50) 19:18 (50)	19:29 (51) 19:53 (51)	05:50 20:53
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 19:08 (50) 19:19 (50)	19:30 (51) 19:53 (51)	05:49 20:54
25	07:51 17:24	07:10 18:05	06:20 19:42	06:26 19:07 (50) 19:20 (50)	19:30 (51) 19:51 (51)	05:49 20:55
26	07:50 17:25	07:09 18:07	06:18 19:43	06:24 19:07 (50) 19:21 (50)	19:31 (51) 19:51 (51)	05:48 20:56
27	07:50 17:26	07:07 18:08	06:17 19:44	06:23 19:08 (50) 19:23 (50)	19:32 (51) 19:49 (51)	05:47 20:57
28	07:49 17:28	07:05 18:09	06:15 19:45	06:21 19:09 (50) 19:24 (50)	19:34 (51) 19:47 (51)	05:46 20:58
29	07:48 17:29		06:13 19:47	06:20 19:09 (50) 19:23 (50)	19:36 (51) 19:44 (51)	05:46 20:59
30	07:47 17:31		06:11 19:48	06:18 19:11 (50) 19:20 (50)	06:18 20:59	05:45 21:14
31	07:45 17:32		06:09 19:49	20:26	05:44 21:00	
Potential sun hours	287	292	369	403	458	464
Total, worst case			113		298	509
Sun reduction			0.59		0.61	0.70
Oper. time red.			0.98		0.98	0.98
Wind dir. red.			0.59		0.62	0.68
Total reduction			0.34		0.37	0.47
Total, real			38		110	238

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H292 - H292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	20:28 (52)	06:11	06:47	07:22	07:01	07:40		
	21:14	18 20:46 (52)	20:52	20:04	19:09	17:15	16:47		
2	05:44	20:29 (52)	06:12	06:48	07:23	07:03	07:42		
	21:13	18 20:47 (52)	20:51	20:03	19:07	17:14	16:47		
3	05:45	20:29 (52)	06:13	06:49	07:24	07:04	07:43		
	21:13	17 20:46 (52)	20:50	20:01	19:05	17:12	16:46		
4	05:45	20:30 (52)	06:14	06:50	07:26	07:06	07:44		
	21:13	16 20:46 (52)	20:48	19:59	19:03	17:11	16:46		
5	05:46	20:31 (52)	06:15	06:51	07:27	07:07	07:45		
	21:13	14 20:45 (52)	20:47	19:57	19:01	17:10	16:46		
6	05:47	20:32 (52)	06:17	06:53	07:28	07:08	07:46		
	21:13	13 20:45 (52)	20:46	19:55	19:00	17:08	16:45		
7	05:47	20:33 (52)	06:18	06:54	07:29	07:10	07:47		
	21:12	12 20:45 (52)	20:44	19:54	18:56	17:07	16:45		
8	05:48	20:34 (52)	06:19	06:55	07:30	07:11	07:48		
	21:12	10 20:44 (52)	20:43	19:52	18:54	17:06	16:45		
9	05:49	20:36 (52)	06:20	06:56	07:32	07:12	07:49		
	21:11	8 20:44 (52)	20:42	19:50	18:52	17:05	16:45		
10	05:50	20:39 (52)	06:21	06:57	07:33	07:14	07:50		
	21:11	5 20:44 (52)	20:40	19:48	18:51	17:04	16:45		
11	05:50		06:22	06:58	07:34	07:15	07:51		
	21:10		20:39	19:46	18:49	17:02	16:45		
12	05:51		06:23	07:00	07:35	07:16	07:52		
	21:10		20:37	19:44	18:47	17:01	16:45		
13	05:52		06:25	07:01	07:37	07:18	07:52		
	21:09		20:36	19:42	8 19:11 (50)	18:45	17:00	16:45	
14	05:53		06:26	19:43 (51)	07:02	19:00 (50)	07:38	07:19	07:53
	21:09		20:34	11 19:54 (51)	19:41	13 19:13 (50)	18:44	16:59	16:45
15	05:54		06:27	19:41 (51)	07:03	18:58 (50)	07:39	07:20	07:54
	21:08		20:33	14 19:55 (51)	19:39	15 19:13 (50)	18:42	16:58	16:46
16	05:55		06:28	19:39 (51)	07:04	18:57 (50)	07:40	07:22	07:55
	21:07		20:31	18 19:57 (51)	19:37	15 19:12 (50)	18:40	16:57	16:46
17	05:56		06:29	19:38 (51)	07:05	18:57 (50)	07:42	07:23	07:55
	21:07		20:30	20 19:58 (51)	19:35	14 19:11 (50)	18:38	16:56	16:46
18	05:56		06:30	19:36 (51)	07:07	18:56 (50)	07:43	07:24	07:56
	21:06		20:28	22 19:58 (51)	19:33	13 19:09 (50)	18:37	16:55	16:47
19	05:57		06:32	19:35 (51)	07:08	18:55 (50)	07:44	07:26	07:57
	21:05		20:27	23 19:58 (51)	19:31	12 19:07 (50)	18:35	16:54	16:47
20	05:58		06:33	19:34 (51)	07:09	18:55 (50)	07:46	07:27	07:57
	21:04		20:25	25 19:59 (51)	19:29	10 19:05 (50)	18:33	16:54	16:47
21	05:59		06:34	19:34 (51)	07:10	18:55 (50)	07:47	07:28	07:58
	21:04		20:23	24 19:58 (51)	19:27	8 19:03 (50)	18:32	16:53	16:48
22	06:00		06:35	19:33 (51)	07:11	18:55 (50)	07:48	07:30	07:58
	21:03		20:22	23 19:56 (51)	19:26	5 19:00 (50)	18:30	16:52	16:48
23	06:01		06:36	19:34 (51)	07:12	18:56 (50)	07:50	07:31	07:59
	21:02		20:20	22 19:56 (51)	19:24	2 18:58 (50)	18:29	16:51	16:49
24	06:02		06:37	19:34 (51)	07:14		07:51	07:32	07:59
	21:01		20:18	20 19:54 (51)	19:22		18:27	16:51	16:49
25	06:03		06:39	19:33 (51)	07:15		07:52	07:33	08:00
	21:00		20:17	19 19:52 (51)	19:20		18:25	16:50	16:50
26	06:04		06:40	19:34 (51)	07:16		07:53	07:35	08:00
	20:59		20:15	16 19:50 (51)	19:18		18:24	16:49	16:51
27	06:06		06:41	19:34 (51)	07:17		07:55	07:36	08:00
	20:58		20:13	14 19:48 (51)	19:16		18:22	16:49	16:51
28	06:07		06:42	19:34 (51)	07:18		07:56	07:37	08:01
	20:57		20:12	13 19:47 (51)	19:14		18:21	16:48	16:52
29	06:08		06:43	19:35 (51)	07:20		07:57	07:38	08:01
	20:56		20:10	10 19:45 (51)	19:12		18:19	16:48	16:53
30	06:09		06:44	19:36 (51)	07:21		07:59	07:39	08:01
	20:55		20:08	7 19:43 (51)	19:11		18:18	16:47	16:54
31	06:10		06:46	19:39 (51)			08:00		08:01
	20:53		20:06	2 19:41 (51)			18:17		16:54
Potential sun hours	471	435		377	341	289		276	
Total, worst case	131		303		115				
Sun reduction	0.76		0.74		0.69				
Oper. time red.	0.98		0.98		0.98				
Wind dir. red.	0.68		0.62		0.59				
Total reduction	0.51		0.45		0.40				
Total, real	66		136		46				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H293 - H293

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:01	07:44	07:04	07:07	07:58 (54)	06:16	05:44	05:44	06:11	06:47	07:22	07:43 (54)	07:01	07:40	
	16:55	17:33	18:11	19:50	08:26 (54)	20:27	21:01	21:14	20:52	20:04	19:09	08:14 (54)	17:15	16:47	
2	08:02	07:43	07:02	07:05	08:00 (54)	06:15	05:43	05:44	06:12	06:48	07:23	07:44 (54)	07:03	07:42	
	16:56	17:35	18:12	19:52	08:24 (54)	20:29	21:02	21:13	20:51	20:03	19:07	08:12 (54)	17:14	16:46	
3	08:02	07:42	07:00	07:04	08:02 (54)	06:14	05:43	05:45	06:13	06:49	07:24	07:45 (54)	07:04	07:43	
	16:57	17:36	18:13	19:53	08:21 (54)	20:30	21:03	21:13	20:50	20:01	19:05	08:10 (54)	17:12	16:46	
4	08:02	07:41	06:58	07:02	08:06 (54)	06:12	05:42	05:45	06:14	06:50	07:26	07:47 (54)	07:06	07:44	
	16:58	17:37	18:15	19:54	08:17 (54)	20:31	21:04	21:13	20:48	19:59	19:03	08:08 (54)	17:11	16:46	
5	08:01	07:40	06:57	07:00		06:11	05:42	05:46	06:15	06:51	07:27	07:49 (54)	07:07	07:45	
	16:59	17:39	18:16	19:55		20:32	21:04	21:13	20:47	19:57	19:01	08:04 (54)	17:10	16:46	
6	08:01	07:38	06:55	06:58		06:09	05:41	05:47	06:16	06:53	07:28		07:08	07:46	
	17:00	17:40	18:17	19:56		20:33	21:05	21:13	20:46	19:55	19:00		17:08	16:45	
7	08:01	07:37	06:53	06:56		06:08	05:41	05:47	06:18	06:54	07:29		17:07	07:47	
	17:01	17:42	18:19	19:58		20:35	21:06	21:12	20:44	19:54	18:56		17:07	16:45	
8	08:01	07:36	07:51	06:55	08:15 (54)	06:07	05:41	05:48	06:19	06:55	07:30	08:00 (54)	07:11	07:48	
	17:02	17:43	18:20	19:59	08:25 (54)	20:36	21:07	21:12	20:43	19:52	11	08:11 (54)	18:54	17:06	16:45
9	08:01	07:34	07:50	06:53	08:10 (54)	06:05	05:40	05:49	06:20	06:56	07:32	07:56 (54)	07:12	07:49	
	17:03	17:45	19:21	20:00	08:29 (54)	20:37	21:07	21:11	20:42	19:50	18	08:14 (54)	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	08:08 (54)	06:04	05:40	05:50	06:21	06:57	07:33	07:54 (54)	07:33	07:50	
	17:05	17:46	19:23	20:01	08:31 (54)	20:38	21:08	21:11	20:40	19:48	23	08:17 (54)	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	08:06 (54)	06:03	05:40	05:50	06:22	06:58	07:34	07:51 (54)	07:34	07:51	
	17:06	17:47	19:24	20:03	08:33 (54)	20:39	21:09	21:10	20:39	19:46	28	08:19 (54)	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	08:04 (54)	06:02	05:40	05:51	06:23	06:59	07:49	07:54 (54)	07:35	07:52	
	17:07	17:49	19:25	20:04	08:34 (54)	20:40	21:09	21:10	20:37	19:44	31	08:20 (54)	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	08:03 (54)	06:01	05:40	05:52	06:25	07:01	07:47	07:54 (54)	07:37	07:52	
	17:08	17:50	19:26	20:05	08:36 (54)	20:42	21:10	21:09	20:36	19:42	42	18:54 (53)	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	08:01 (54)	06:00	05:40	05:53	06:26	07:02	07:46	07:54 (54)	07:38	07:53	
	17:09	17:52	19:28	20:06	19:05 (53)	20:43	21:10	21:09	20:34	19:41	50	18:57 (53)	18:44	16:59	16:45
15	07:58	07:26	07:39	06:42	07:59 (54)	06:00	05:40	05:54	06:27	07:03	07:44	07:54 (54)	07:39	07:54	
	17:10	17:53	19:29	20:08	19:08 (53)	20:44	21:11	21:08	20:33	19:39	56	18:58 (53)	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	07:57 (54)	06:00	05:40	05:55	06:28	07:04	07:43	07:54 (54)	07:40	07:52	
	17:12	17:54	19:30	20:09	19:09 (53)	20:45	21:11	21:07	20:31	19:37	60	18:59 (53)	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	07:56 (54)	06:00	05:40	05:55	06:29	07:05	07:42	07:54 (54)	07:42	07:53	
	17:13	17:56	19:32	20:10	19:10 (53)	20:46	21:12	21:07	20:30	19:35	63	18:59 (53)	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	07:55 (54)	06:00	05:40	05:56	06:30	07:06	07:42	07:54 (54)	07:43	07:56	
	17:14	17:57	19:33	20:11	19:11 (53)	20:47	21:12	21:06	20:28	19:33	67	19:01 (53)	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	07:55 (54)	06:00	05:40	05:57	06:32	07:08	07:41	07:54 (54)	07:44	07:52	
	17:16	17:58	19:34	20:13	19:12 (53)	20:48	21:12	21:05	20:27	19:31	69	19:01 (53)	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	07:55 (54)	06:00	05:40	05:58	06:33	07:09	07:40	07:54 (54)	07:46	07:57	
	17:17	18:00	19:35	20:14	19:14 (53)	20:49	21:13	21:04	20:25	19:29	68	19:00 (53)	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	07:54 (54)	06:00	05:40	05:52	06:34	07:10	07:39	07:54 (54)	07:47	07:58	
	17:18	18:00	19:37	20:15	19:15 (53)	20:51	21:13	21:04	20:23	19:27	70	19:00 (53)	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	07:54 (54)	06:00	05:40	06:00	06:35	07:11	07:39	07:54 (54)	07:48	07:58	
	17:20	18:01	19:38	20:16	19:15 (53)	20:52	21:13	21:03	20:22	19:26	70	18:59 (53)	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	07:54 (54)	06:00	05:40	06:01	06:36	07:12	07:38	07:54 (54)	07:49	07:59	
	17:21	18:03	19:39	20:17	19:14 (53)	20:53	21:13	21:02	20:20	19:24	69	18:58 (53)	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	07:53 (54)	06:00	05:41	06:02	06:37	07:14	07:39	07:54 (54)	07:51	07:59	
	17:22	18:04	19:40	20:19	19:13 (53)	20:54	21:13	21:01	20:18	19:22	66	18:57 (53)	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	07:53 (54)	06:00	05:41	06:03	06:39	07:15	07:39	07:54 (54)	07:52	07:58	
	17:24	18:05	19:42	20:20	19:12 (53)	20:55	21:14	21:00	20:17	19:20	63	18:55 (53)	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	07:53 (54)	06:00	05:41	06:04	06:40	07:16	07:39	07:54 (54)	07:53	07:58	
	17:25	18:07	19:43	20:21	19:11 (53)	20:56	21:14	20:59	20:15	19:18	59	18:53 (53)	18:24	16:49	16:50
27	07:50	07:07	07:16	06:23	07:54 (54)	06:00	05:42	06:05	06:41	07:17	07:39	07:54 (54)	07:55	07:58	
	17:26	18:08	19:44	20:22	19:11 (53)	20:57	21:14	20:58	20:13	19:16	55	18:51 (53)	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	07:55 (54)	06:00	05:42	06:07	06:42	07:18	07:39	07:54 (54)	07:56	07:58	
	17:28	18:09	19:45	20:24	19:09 (53)	20:58	21:14	20:57	20:11	19:14	51	18:49 (53)	18:21	16:48	16:52
29	07:48		07:13	06:19	07:55 (54)	06:00	05:43	06:08	06:43	07:19	07:40	07:54 (54)	07:57	07:58	
	17:29		19:47	20:25	19:07 (53)	20:59	21:14	20:56	20:10	19:12	44	18:47 (53)	18:19	16:48	16:53
30	07:46		07:11	06:18	07:56 (54)	06:00	05:43	06:09	06:40	07:21	07:42	07:54 (54)	07:59	07:59	
	17:30		19:48	20:26	19:03 (53)	20:59	21:14	20:55	20:08	19:11	34	08:16 (54)	18:18	16:47	16:53
31	07:45		07:09	06:15	08:28 (54)	06:00	05:44	06:10	06:46				08:00	08:01	
	17:32		19:49	20:28		21:00		20:53	20:06				18:16	16:54	
Potential sun hours	287	292	369	403	458	471	435	377	1167	120	289	276			
Total, worst case			1187	82					69	120					
Sun reduction			0.59	0.61					0.69	0.63					
Oper. time red.			0.98	0.98					0.98	0.98					
Wind dir. red.			0.60	0.61					0.60	0.61					
Total reduction			0.35	0.37					0.41	0.38					
Total, real			413	30					475	45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H294 - H294

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47	
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:46	
3	08:01 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:13 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46	
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46	
5	08:01 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46	
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:47 21:12	06:16 20:46	06:52 19:55	07:28 18:58	07:08 17:08	07:46 16:45	
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:18 20:44	06:54 19:53	07:29 18:56	07:09 17:07	07:47 16:45	
8	08:01 17:02	07:36 17:43	06:51 18:20	06:54 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45	
9	08:01 17:03	07:34 17:44	06:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45	
10	08:00 17:04	07:33 17:46	06:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:49 21:11	06:21 20:40	06:57 19:48	07:33 18:50	07:14 17:03	07:50 16:45	
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:08	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45	
12	08:00 17:07	07:30 17:49	06:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45	
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:00 20:42	05:40 21:10	05:52 21:09	06:24 20:36	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:45	
14	07:59 17:09	07:27 17:51	06:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	9 19:54 (54)	07:02 19:41	07:38 18:43	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	06:39 19:29	06:42 20:08	05:58 20:44	05:39 21:11	05:54 21:08	06:27 20:33	12 19:52 (54)	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	06:37 19:30	06:40 20:09	05:57 20:45	05:39 21:11	05:54 21:07	06:28 20:31	14 19:52 (54)	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:31	06:39 20:10	05:56 20:46	05:39 21:11	05:55 21:07	06:29 20:30	15 19:50 (54)	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	13 19:50 (54)	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	06:31 19:34	06:35 20:12	3 19:47 (54)	05:54 20:48	05:40 21:12	06:31 21:05	12 20:03 (54)	07:08 19:31	07:44 18:35	07:26 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	6 19:45 (54)	05:53 20:49	05:40 21:13	06:33 21:04	11 19:49 (54)	07:09 19:29	07:45 18:33	07:27 16:53	07:57 16:47
21	07:55 17:18	07:17 18:00	06:27 19:36	06:32 20:15	8 19:44 (54)	05:52 20:50	05:40 21:13	06:34 21:03	9 19:49 (54)	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:19	07:15 18:01	06:26 19:38	06:30 20:16	10 19:44 (54)	05:51 20:51	05:40 21:13	06:35 21:03	7 19:56 (54)	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:03	06:24 19:39	06:29 20:17	11 19:43 (54)	05:50 20:53	05:40 21:13	06:01 21:02	6 19:49 (54)	07:12 19:24	07:49 18:28	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	13 19:43 (54)	05:49 20:54	05:41 21:13	06:02 21:01	3 19:50 (54)	07:13 19:22	07:51 18:27	07:32 16:50	07:59 16:49
25	07:51 17:23	07:10 18:05	06:20 19:41	06:26 20:20	14 19:43 (54)	05:48 20:55	05:41 21:14	06:03 21:00	07:15 19:20	07:52 18:25	07:33 16:50	08:00 16:50	
26	07:50 17:25	07:09 18:07	06:18 19:43	06:24 20:21	14 19:44 (54)	05:48 20:56	05:41 21:14	06:04 20:59	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:50	
27	07:49 17:26	07:07 18:08	06:16 19:44	06:22 20:22	14 19:44 (54)	05:47 20:57	05:42 21:14	06:05 20:58	07:17 19:16	07:55 18:22	07:36 16:49	08:00 16:51	
28	07:48 17:28	07:05 18:09	06:15 19:45	06:21 20:24	11 19:46 (54)	05:46 20:57	05:42 21:14	06:06 20:57	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52	
29	07:47 17:29	07:04 19:46	06:13 20:25	06:19 20:25	7 19:54 (54)	05:45 20:58	05:43 21:14	06:08 20:56	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:53	
30	07:46 17:30	07:03 19:48	06:11 20:26	06:18 20:26	05:45 20:59	05:43 21:14	06:09 20:54	06:44 20:08	07:21 19:11	07:59 18:18	07:39 16:47	08:01 16:53	
31	07:45 17:32	07:02 19:49	06:09 19:49	06:19 20:00	05:44 21:00	06:10 20:53	06:45 20:06	06:45 20:06	08:00 18:16	07:59 17:00	07:39 16:45	08:01 16:54	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	
Total, worst case				111				111					
Sun reduction				0.61				0.74					
Oper. time red.				0.98				0.98					
Wind dir. red.				0.62				0.62					
Total reduction				0.37				0.45					
Total, real				41				50					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H295 - H295

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:43 21:14	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:34	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:46
3	08:01 16:57	07:42 17:36	07:00 18:13	07:03 19:53	06:13 20:30	05:42 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:40 17:39	06:56 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:09	07:45 16:45
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:46 21:12	06:16 20:46	06:52 19:55	07:28 18:58	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:18	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:17 20:44	06:54 19:53	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	06:51 18:20	06:54 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:34 17:44	06:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:00 17:04	07:33 17:46	06:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:49 21:11	06:21 20:40	06:57 19:48	07:33 18:50	07:14 17:03	07:50 16:45
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:09	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:00 20:42	05:39 21:10	05:52 21:09	06:24 20:36	07:01 19:42	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:51	06:40 19:28	06:44 20:06	05:59 20:43	05:39 21:10	05:53 21:09	06:26 20:34	07:02 19:40	07:38 18:43	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	06:39 19:29	06:42 20:07	05:58 20:44	05:39 21:11	05:53 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:45
16	07:58 17:12	07:24 17:54	06:37 19:30	06:40 20:09	05:57 20:45	05:39 21:11	05:54 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:31	06:39 20:10	05:56 20:46	05:39 21:11	05:55 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:39 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	06:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:31 20:26	07:08 19:31	07:44 18:35	07:26 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	05:53 20:49	05:40 21:13	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33	07:27 16:53	07:57 16:47
21	07:55 17:18	07:17 18:00	06:27 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:47
22	07:54 17:19	07:15 18:01	06:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:02	06:24 19:39	06:29 20:17	05:50 20:53	05:40 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:28	07:31 16:51	07:59 16:48
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	05:49 20:54	05:41 21:13	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:50	07:59 16:49
25	07:51 17:23	07:10 18:05	06:20 19:41	06:25 20:20	05:48 20:55	05:41 21:14	06:03 21:00	06:38 20:17	07:15 19:20	07:52 18:25	07:33 16:50	08:00 16:50
26	07:50 17:25	07:08 18:07	06:18 19:43	06:24 20:21	05:48 20:56	05:41 21:14	06:04 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:50
27	07:49 17:26	07:07 18:08	06:16 19:44	06:22 20:22	05:47 20:57	05:42 21:14	06:05 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:36 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	06:14 19:45	06:21 20:24	05:46 20:57	05:42 21:14	06:06 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29		06:13 19:46	06:19 20:25	05:45 20:58	05:42 21:14	05:42 20:56	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:52
30	07:46 17:30		06:11 19:48	06:18 20:26	05:45 20:59	05:43 21:14	06:08 20:54	06:44 20:08	07:21 19:10	07:59 18:18	07:39 16:47	08:01 16:53
31	07:45 17:32		07:09 19:49		05:44 21:00		06:10 20:53	06:45 20:06		08:00 18:16		08:01 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H296 - H296

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:01	07:42	07:00	07:03	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:09	07:47
	17:01	17:42	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:13	21:00	20:16	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H297 - H297

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	16:07 (33)	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:41	15:55 (33)
	16:55	20 16:27 (33)	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47	18 16:13 (33)
2	08:02	16:08 (33)	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42	15:55 (33)
	16:56	20 16:28 (33)	17:35	18:12	19:52	20:29	21:02	21:13	20:51	20:03	19:07	17:14	16:46	18 16:13 (33)
3	08:02	16:08 (33)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43	15:55 (33)
	16:57	21 16:29 (33)	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46	19 16:14 (33)
4	08:02	16:09 (33)	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44	15:55 (33)
	16:58	20 16:29 (33)	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46	19 16:14 (33)
5	08:01	16:10 (33)	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45	15:55 (33)
	16:59	20 16:30 (33)	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46	20 16:15 (33)
6	08:01	16:09 (33)	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46	15:55 (33)
	17:00	20 16:29 (33)	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45	20 16:15 (33)
7	08:01	16:10 (33)	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47	15:56 (33)
	17:01	20 16:30 (33)	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45	20 16:16 (33)
8	08:01	16:11 (33)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48	15:56 (33)
	17:02	19 16:30 (33)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45	20 16:16 (33)
9	08:01	16:12 (33)	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49	15:56 (33)
	17:03	19 16:31 (33)	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45	21 16:17 (33)
10	08:01	16:12 (33)	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50	15:57 (33)
	17:04	18 16:30 (33)	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45	20 16:17 (33)
11	08:00	16:13 (33)	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51	15:57 (33)
	17:06	18 16:31 (33)	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45	20 16:17 (33)
12	08:00	16:14 (33)	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52	15:58 (33)
	17:07	16 16:30 (33)	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45	19 16:17 (33)
13	07:59	16:15 (33)	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52	15:58 (33)
	17:08	16 16:31 (33)	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45	20 16:18 (33)
14	07:59	16:16 (33)	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53	15:59 (33)
	17:09	14 16:30 (33)	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45	19 16:18 (33)
15	07:58	16:18 (33)	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54	15:59 (33)
	17:10	12 16:30 (33)	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46	18 16:17 (33)
16	07:58	16:19 (33)	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55	16:00 (33)
	17:12	10 16:29 (33)	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46	18 16:18 (33)
17	07:57	16:21 (33)	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55	16:00 (33)
	17:13	6 16:27 (33)	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46	18 16:18 (33)
18	07:57		07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56	16:01 (33)
	17:14		17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46	18 16:19 (33)
19	07:56		07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57	16:01 (33)
	17:15		17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47	18 16:19 (33)
20	07:55		07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57	16:02 (33)
	17:17		18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47	17 16:19 (33)
21	07:55		07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58	16:02 (33)
	17:18		18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48	17 16:19 (33)
22	07:54		07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58	16:03 (33)
	17:19		18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48	17 16:20 (33)
23	07:53		07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59	16:03 (33)
	17:21		18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49	17 16:20 (33)
24	07:52		07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59	16:04 (33)
	17:22		18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49	17 16:21 (33)
25	07:51		07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33		15:59 (33) 16:49 17 16:21 (33)
	17:23		18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	6 16:05 (33) 16:50 18 16:22 (33)	
26	07:50		07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35		15:58 (33) 16:00 18 16:22 (33)
	17:25		18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	10 16:08 (33) 16:50 18 16:22 (33)	
27	07:50		07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36		15:57 (33) 16:00 18 16:22 (33)
	17:26		18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	12 16:09 (33) 16:51 17 16:22 (33)	
28	07:49		07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37		15:56 (33) 16:01 18 16:22 (33)
	17:28		18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	14 16:10 (33) 16:52 18 16:24 (33)	
29	07:48		07:13	06:19	05:45	05:43	05:43	06:08	06:43	07:19	07:57	07:38		15:55 (33) 16:01 18 16:24 (33)
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	17:26	16:48	16 16:11 (33) 16:53 19 16:25 (33)	
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	07:20		15:56 (33) 16:01 18 16:25 (33)
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	17:26	16:47	16 16:12 (33) 16:53 19 16:25 (33)	
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01		16:07 (33)
	17:32		19:49		21:00		20:53	20:06		18:16		16:54	19 16:26 (33)	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276		
Total, worst case	289										74		576	
Sun reduction	0.57										0.50		0.49	
Oper. time red.	0.98										0.98		0.98	
Wind dir. red.	0.56										0.56		0.56	
Total reduction	0.31										0.27		0.27	
Total, real	90										20		153	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
	Sun set (hh:mm)					

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H299 - H299

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:46	05:43	06:08	06:43	07:20	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H300 - H300

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:02	16:15 (47)	07:44	07:04	07:28 (53)	07:07	06:17	05:44	06:07 (33)	
	16:55	12 16:27 (47)	17:33	18:11	24 07:52 (53)	19:50	20:27	21:01	14 06:21 (33)	
2	08:02	16:15 (47)	07:43	07:02	07:29 (53)	07:06	06:15	05:43	06:07 (33)	
	16:56	13 16:28 (47)	17:35	18:12	21 07:50 (53)	19:52	20:29	21:02	14 06:21 (33)	
3	08:02	16:15 (47)	07:42	07:00	07:30 (53)	07:04	06:14	05:43	06:07 (33)	
	16:57	14 16:29 (47)	17:36	18:13	20 07:50 (53)	19:53	20:30	21:03	13 06:20 (33)	
4	08:02	16:16 (47)	07:41	06:58	07:31 (53)	07:02	06:12	20:05 (32)	05:42	06:08 (33)
	16:58	14 16:30 (47)	17:38	18:15	17 07:48 (53)	19:54	20:31	2 20:07 (32)	21:04	12 06:20 (33)
5	08:02	16:16 (47)	07:40	06:57	07:33 (53)	07:00	06:11	20:02 (32)	05:42	06:08 (33)
	16:59	15 16:31 (47)	17:39	18:16	13 07:46 (53)	19:55	20:32	6 20:08 (32)	21:05	11 06:19 (33)
6	08:01	16:15 (47)	07:38	06:55	07:36 (53)	06:58	06:09	20:01 (32)	05:41	06:09 (33)
	17:00	17 16:32 (47)	17:40	18:17	5 07:41 (53)	19:57	20:33	9 20:10 (32)	21:05	10 06:19 (33)
7	08:01	16:16 (47)	07:37	06:53		06:56	06:08	20:00 (32)	05:41	06:10 (33)
	17:01	17 16:33 (47)	17:42	18:19		19:58	20:35	11 20:11 (32)	21:06	9 06:19 (33)
8	08:01	16:16 (47)	07:36	07:51		06:55	06:07	19:58 (32)	05:41	06:10 (33)
	17:02	18 16:34 (47)	17:43	18:20		19:59	20:36	14 20:12 (32)	21:07	8 06:18 (33)
9	08:01	16:17 (47)	07:35	07:50		06:53	06:06	19:58 (32)	05:40	06:12 (33)
	17:04	19 16:36 (47)	17:45	19:21		20:00	20:37	15 20:13 (32)	21:07	5 06:17 (33)
10	08:01	16:16 (47)	07:33	07:48		06:51	06:04	19:57 (32)	05:40	06:14 (33)
	17:05	21 16:37 (47)	17:46	19:23		20:02	20:38	17 20:14 (32)	21:08	1 06:15 (33)
11	08:00	16:17 (47)	07:32	07:46		06:49	06:03	19:57 (32)	05:40	
	17:06	21 16:38 (47)	17:47	19:24		20:03	20:39	18 20:15 (32)	21:09	
12	08:00	16:17 (47)	07:30	07:44		06:48	06:02	19:57 (32)	05:40	
	17:07	22 16:39 (47)	17:49	19:25		20:04	20:41	20 20:17 (32)	21:09	
13	07:59	16:18 (47)	07:29	07:42		06:46	06:01	19:56 (32)	05:40	
	17:08	23 16:41 (47)	17:50	19:27		20:05	20:42	21 20:17 (32)	21:10	
14	07:59	16:18 (47)	07:28	07:41		06:44	05:59	19:55 (32)	05:40	
	17:09	23 16:41 (47)	17:52	19:28		20:06	20:43	23 20:18 (32)	21:10	
15	07:59	16:19 (47)	07:26	07:39		06:42	05:58	19:55 (32)	05:40	
	17:11	24 16:43 (47)	17:53	19:29		20:08	20:44	24 20:19 (32)	21:11	
16	07:58	16:19 (47)	07:25	07:37		06:41	05:57	19:56 (32)	05:40	
	17:12	24 16:43 (47)	17:54	19:30		20:09	20:45	24 20:20 (32)	21:11	
17	07:57	16:19 (47)	07:23	07:35		06:39	05:56	06:18 (33)	05:40	
	17:13	23 16:42 (47)	17:56	19:32		20:10	20:46	26 20:21 (32)	21:12	
18	07:57	16:20 (47)	07:22	07:33		06:37	05:55	06:17 (33)	05:40	
	17:14	23 16:43 (47)	17:57	4 07:47 (53)	19:33	20:11	20:47	28 20:21 (32)	21:12	
19	07:56	16:21 (47)	07:20	07:41 (53)	07:31	06:36	05:54	06:16 (33)	05:40	
	17:16	22 16:43 (47)	17:59	8 07:49 (53)	19:34	20:13	20:48	29 20:21 (32)	21:12	
20	07:55	16:21 (47)	07:18	07:39 (53)	07:30	06:34	05:53	06:15 (33)	05:40	
	17:17	22 16:43 (47)	18:00	11 07:50 (53)	19:35	20:14	20:50	30 20:21 (32)	21:13	
21	07:55	16:22 (47)	07:17	07:38 (53)	07:28	06:32	05:52	06:15 (33)	05:40	
	17:18	20 16:42 (47)	18:00	14 07:52 (53)	19:37	20:15	20:51	30 20:21 (32)	21:13	
22	07:54	16:23 (47)	07:15	07:36 (53)	07:26	06:31	05:51	06:14 (33)	05:40	
	17:20	20 16:43 (47)	18:01	16 07:52 (53)	19:38	20:16	20:52	31 20:21 (32)	21:13	
23	07:53	16:24 (47)	07:14	07:34 (53)	07:24	06:29	05:50	06:13 (33)	05:41	
	17:21	18 16:42 (47)	18:03	18 07:52 (53)	19:39	20:18	20:53	31 20:20 (32)	21:13	
24	07:52	16:26 (47)	07:12	07:33 (53)	07:22	06:27	05:49	06:12 (33)	05:41	
	17:22	15 16:41 (47)	18:04	20 07:53 (53)	19:40	20:19	20:54	30 20:19 (32)	21:14	
25	07:51	16:27 (47)	07:10	07:31 (53)	07:20	06:26	05:49	06:11 (33)	05:41	
	17:24	13 16:40 (47)	18:05	22 07:53 (53)	19:42	20:20	20:55	30 20:18 (32)	21:14	
26	07:51	16:30 (47)	07:09	07:29 (53)	07:18	06:24	05:48	06:11 (33)	05:41	
	17:25	8 16:38 (47)	18:07	24 07:53 (53)	19:43	20:21	20:56	28 20:18 (32)	21:14	
27	07:50		07:07	07:28 (53)	07:17	06:23	05:47	06:10 (33)	05:42	
	17:26		18:08	25 07:53 (53)	19:44	20:22	20:57	27 20:17 (32)	21:14	
28	07:49		07:05	07:28 (53)	07:15	06:21	05:46	06:09 (33)	05:42	
	17:28		18:09	25 07:53 (53)	19:45	20:24	20:58	27 20:16 (32)	21:14	
29	07:48				07:13	06:20	05:46	06:09 (33)	05:43	
	17:29				19:47	20:25	20:59	25 20:16 (32)	21:14	
30	07:47				07:11	06:18	05:45	06:08 (33)	05:43	
	17:31				19:48	20:26	21:00	21 20:14 (32)	21:14	
31	07:46				07:09		05:44	06:08 (33)		
	17:32				19:49		21:00	17 20:12 (32)		
Potential sun hours	287	292	369	403	458	464				
Total, worst case	481	187	100	614	97					
Sun reduction	0.57	0.59	0.59	0.65	0.70					
Oper. time red.	0.98	0.98	0.98	0.98	0.98					
Wind dir. red.	0.56	0.63	0.63	0.63	0.56					
Total reduction	0.31	0.36	0.36	0.40	0.38					
Total, real	149	67	36	245	37					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H300 - H300

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	20:06 (32)	06:47	07:22	07:02
	21:14	20:52	20:26 (32)	20:05	19:09	17:15
2	05:44	06:12	20:07 (32)	06:48	07:23	07:03
	21:14	20:51	20:25 (32)	20:03	19:07	17:14
3	05:45	06:18 (33)	06:13	20:07 (32)	06:49	07:24
	21:13	4 06:22 (33)	20:50	16 20:23 (32)	20:01	19:05
4	05:45	06:17 (33)	06:14	20:08 (32)	06:50	07:26
	21:13	6 06:23 (33)	20:49	15 20:23 (32)	19:59	19:03
5	05:46	06:16 (33)	06:15	20:09 (32)	06:51	07:27
	21:13	8 06:24 (33)	20:47	13 20:22 (32)	19:57	19:01
6	05:47	06:15 (33)	06:17	20:10 (32)	06:53	07:28
	21:13	10 06:25 (33)	20:46	10 20:20 (32)	19:55	19:00
7	05:47	06:15 (33)	06:18	20:11 (32)	06:54	07:29
	21:12	11 06:26 (33)	20:45	8 20:19 (32)	19:54	18:56
8	05:48	06:14 (33)	06:19	20:13 (32)	06:55	07:31
	21:12	12 06:26 (33)	20:43	5 20:18 (32)	19:52	18:54
9	05:49	06:14 (33)	06:20	06:56	07:32	10 08:10 (53)
	21:12	13 06:27 (33)	20:42	19:50	18:52	15 08:22 (53)
10	05:50	06:14 (33)	06:21	06:57	07:33	17:05
	21:11	14 06:28 (33)	20:40	19:48	18:51	18 08:23 (53)
11	05:50	06:15 (33)	06:22	06:58	07:34	17:04
	21:11	14 06:29 (33)	20:39	19:46	18:49	18 08:24 (53)
12	05:51	06:15 (33)	06:23	07:00	07:35	17:05
	21:10	14 06:29 (33)	20:37	19:44	18:47	22 08:25 (53)
13	05:52	06:16 (33)	06:25	07:01	07:37	17:01
	21:09	20 20:21 (32)	20:36	19:43	18:45	24 08:25 (53)
14	05:53	06:17 (33)	06:26	07:02	07:38	17:00
	21:09	23 20:23 (32)	20:34	19:41	18:44	25 08:25 (53)
15	05:54	06:18 (33)	06:27	07:03	07:39	17:01
	21:08	26 20:25 (32)	20:33	19:39	18:42	25 08:26 (53)
16	05:55	06:19 (33)	06:28	07:04	07:41	16:58
	21:08	26 20:26 (32)	20:31	19:37	18:40	23 08:22 (53)
17	05:56	06:20 (33)	06:29	07:05	07:42	16:57
	21:07	28 20:27 (32)	20:30	19:35	18:38	22 08:23 (53)
18	05:56	06:20 (33)	06:30	07:07	07:43	16:56
	21:06	29 20:27 (32)	20:28	19:33	18:37	20 08:25 (53)
19	05:57	06:21 (33)	06:32	07:08	07:44	16:55
	21:05	29 20:28 (32)	20:27	19:31	18:35	15 16:15 (47)
20	05:58	06:22 (33)	06:33	07:09	07:46	16:47
	21:05	30 20:29 (32)	20:25	19:29	18:33	18 08:24 (53)
21	05:59	06:23 (33)	06:34	07:10	07:47	16:54
	21:04	30 20:30 (32)	20:23	19:28	18:32	16 16:18 (47)
22	06:00	06:24 (33)	06:35	07:11	07:48	20 16:18 (47)
	21:03	30 20:30 (32)	20:22	19:26	18:30	10 08:10 (53)
23	06:01	06:25 (33)	06:36	07:12	07:50	16:52
	21:02	30 20:31 (32)	20:20	19:24	18:29	7 08:12 (53)
24	06:02	06:26 (33)	06:37	07:14	07:51	16:51
	21:01	29 20:31 (32)	20:18	19:22	18:27	2 08:13 (53)
25	06:03	06:27 (33)	06:39	07:15	07:52	16:51
	21:00	28 20:32 (32)	20:17	19:20	18:26	23 16:20 (47)
26	06:04	06:28 (33)	06:40	07:16	07:54	16:50
	20:59	28 20:32 (32)	20:15	19:18	18:24	23 16:20 (47)
27	06:06	20:06 (32)	06:41	07:17	07:55	16:49
	20:58	25 20:31 (32)	20:13	19:16	18:22	24 16:22 (47)
28	06:07	20:06 (32)	06:42	07:18	07:56	16:51
	20:57	24 20:30 (32)	20:12	19:14	18:21	24 16:22 (47)
29	06:08	20:06 (32)	06:43	07:20	07:58	16:52
	20:56	23 20:29 (32)	20:10	19:13	18:19	24 16:22 (47)
30	06:09	20:06 (32)	06:44	07:21	07:59	16:53
	20:55	22 20:28 (32)	20:08	19:11	18:18	23 16:21 (47)
31	06:10	20:06 (32)	06:46	08:00	08:00	22 16:21 (47)
	20:53	21 20:27 (32)	20:06	18:17	18:17	16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case	607	105	291	301	373	
Sun reduction	0.76	0.74	0.63	0.50	0.49	
Oper. time red.	0.98	0.98	0.98	0.98	0.98	
Wind dir. red.	0.62	0.65	0.63	0.56	0.56	
Total reduction	0.45	0.47	0.38	0.27	0.27	
Total, real	276	49	112	82	99	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H301 - H301

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:02	08:26 (31)	07:44	17:02 (27)	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	16:33 (27)	07:41	08:12 (31)
	16:55	48 15:22 (29)	17:33	5 17:07 (27)	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	13 16:46 (27)	16:47	26 08:38 (31)
2	08:02	08:26 (31)	07:43	17:02 (27)	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	16:32 (27)	07:42	08:12 (31)
	16:56	47 15:21 (29)	17:35	7 17:09 (27)	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16 16:48 (27)	16:47	26 08:38 (31)
3	08:02	08:26 (31)	07:42	17:01 (27)	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	16:31 (27)	07:43	08:12 (31)
	16:57	45 15:21 (29)	17:36	10 17:11 (27)	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16 16:47 (27)	16:46	27 08:39 (31)
4	08:02	08:27 (31)	07:41	17:01 (27)	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	16:31 (27)	07:44	08:13 (31)
	16:58	43 15:20 (29)	17:38	11 17:12 (27)	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16 16:47 (27)	16:46	26 08:39 (31)
5	08:02	08:27 (31)	07:40	17:01 (27)	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	16:31 (27)	07:45	08:13 (31)
	16:59	40 15:19 (29)	17:39	12 17:13 (27)	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	14 16:45 (27)	16:46	26 08:39 (31)
6	08:02	08:28 (31)	07:39	17:01 (27)	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	16:32 (27)	07:46	08:14 (31)
	17:00	36 15:18 (29)	17:40	14 17:15 (27)	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	12 16:44 (27)	16:46	36 15:04 (29)
7	08:01	08:28 (31)	07:37	17:02 (27)	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	16:31 (27)	07:47	08:14 (31)
	17:01	26 08:54 (31)	17:42	15 17:17 (27)	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	11 16:42 (27)	16:45	39 15:06 (29)
8	08:01	08:29 (31)	07:36	17:02 (27)	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	16:31 (27)	07:48	08:15 (31)
	17:02	26 08:55 (31)	17:43	16 17:18 (27)	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	9 16:40 (27)	16:45	43 15:08 (29)
9	08:01	08:29 (31)	07:35	17:03 (27)	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:12	16:33 (27)	07:49	08:15 (31)
	17:04	27 08:56 (31)	17:45	15 17:18 (27)	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	7 16:40 (27)	16:45	45 15:10 (29)
10	08:01	08:29 (31)	07:33	17:04 (27)	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	16:33 (27)	07:50	08:15 (31)
	17:05	26 08:55 (31)	17:46	13 17:17 (27)	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	5 16:38 (27)	16:45	47 15:10 (29)
11	08:00	08:30 (31)	07:32	17:05 (27)	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	16:35 (27)	07:51	08:16 (31)
	17:06	26 08:56 (31)	17:47	10 17:15 (27)	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	2 16:37 (27)	16:45	48 15:12 (29)
12	08:00	08:30 (31)	07:30	17:08 (27)	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:16	16:37 (27)	07:52	08:17 (31)
	17:07	25 08:55 (31)	17:49	5 17:13 (27)	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01		16:45	49 15:13 (29)
13	08:00	08:32 (31)	07:29		07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18		16:45	49 15:13 (29)
	17:08	24 08:56 (31)	17:50		19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00		16:45	49 15:14 (29)
14	07:59	08:32 (31)	07:28		07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19		16:45	49 15:14 (29)
	17:09	24 08:56 (31)	17:52		19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59		16:45	50 15:15 (29)
15	07:59	08:33 (31)	07:26		07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21		16:45	50 15:15 (29)
	17:11	23 08:56 (31)	17:53		19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58		16:46	50 15:16 (29)
16	07:58	08:34 (31)	07:25		07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22		16:46	50 15:16 (29)
	17:12	21 08:55 (31)	17:54		19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57		16:46	50 15:16 (29)
17	07:57	08:35 (31)	07:23		07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23		16:46	50 15:16 (29)
	17:13	21 08:56 (31)	17:56		19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56		16:46	51 15:17 (29)
18	07:57	08:36 (31)	07:22		07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:24		16:46	51 15:17 (29)
	17:14	19 08:55 (31)	17:57		19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55		16:47	51 15:18 (29)
19	07:56	08:37 (31)	07:20		07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26		16:47	51 15:18 (29)
	17:16	17 08:54 (31)	17:59		19:34	20:13	20:49	21:12	21:05	20:27	19:31	18:35	16:54		16:47	52 15:18 (29)
20	07:56	08:39 (31)	07:19		07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27		16:47	52 15:18 (29)
	17:17	14 08:53 (31)	18:00		19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:34	16:54	4 08:20 (31)	07:58	08:23 (31)
21	07:55	08:41 (31)	07:17		07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28		16:47	51 15:19 (29)
	17:18	11 08:52 (31)	18:00		19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	11 08:27 (31)	16:48	51 15:19 (29)
22	07:54	08:45 (31)	07:15		07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30		16:48	51 15:19 (29)
	17:20	4 08:49 (31)	18:01		19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	14 08:29 (31)	16:48	51 15:20 (29)
23	07:53		07:14		07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:50	07:31		16:48	51 15:20 (29)
	17:21		18:03		19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	17 08:31 (31)	16:49	51 15:20 (29)
24	07:52		07:12		07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32		16:49	51 15:20 (29)
	17:22		18:04		19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	19 08:32 (31)	16:49	52 15:21 (29)
25	07:52		07:10		07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33		16:49	52 15:21 (29)
	17:24		18:05		19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	20 08:33 (31)	16:50	51 15:21 (29)
26	07:51		07:09		07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35		16:49	51 15:21 (29)
	17:25		18:07		19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	22 08:35 (31)	16:51	51 15:21 (29)
27	07:50		07:07		07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36		16:49	51 15:21 (29)
	17:26		18:08		19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	23 08:35 (31)	16:51	51 15:22 (29)
28	07:49		07:05		07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37		16:49	51 15:22 (29)
	17:28		18:09		19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	24 08:36 (31)	16:52	50 15:22 (29)
29	07:48				07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38		16:49	50 15:22 (29)
	17:29				19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	24 08:36 (31)	16:53	50 15:22 (29)
30	07:47				07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40		16:49	50 15:22 (29)
	17:31				19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	26 08:38 (31)	16:54	50 15:22 (29)
31	07:46		17:04 (27)		07:09		05:44		06:10	06:46		08:00			16:49	50 15:22 (29)
	17:32	3 17:07 (27)			19:49		21:01		20:54	20:06		18:17	11 17:45 (27)		16:54	49 15:22 (29)
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276				
Total, worst case	596	133								18	325	1399				
Sun reduction	0.57	0.59								0.63	0.50	0.49				
Oper. time red.	0.98	0.98								0.98	0.98	0.98				
Wind dir. red.	0.68															

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H302 - H302

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	08:26 (33)	07:44	07:04	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41	08:08 (33)
	16:55	41 16:27 (30)	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47 42 16:13 (30)
2	08:02	08:26 (33)	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42 08:08 (33)
	16:56	41 16:27 (30)	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47 43 16:13 (30)
3	08:02	08:26 (33)	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43 08:08 (33)
	16:57	42 16:28 (30)	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46 44 16:13 (30)
4	08:02	08:26 (33)	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44 08:09 (33)
	16:58	42 16:28 (30)	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46 44 16:14 (30)
5	08:02	08:26 (33)	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45 08:10 (33)
	16:59	43 16:29 (30)	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46 43 16:14 (30)
6	08:01	08:26 (33)	07:38	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46 08:11 (33)
	17:00	43 16:29 (30)	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:56	19:00	17:08	16:45 44 16:15 (30)
7	08:01	08:25 (33)	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47 08:13 (33)
	17:01	43 16:29 (30)	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45 43 16:16 (30)
8	08:01	08:25 (33)	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48 08:14 (33)
	17:02	44 16:30 (30)	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45 42 16:16 (30)
9	08:01	08:25 (33)	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49 08:14 (33)
	17:03	44 16:30 (30)	17:45	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45 42 16:16 (30)
10	08:01	08:25 (33)	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50 08:15 (33)
	17:05	43 16:30 (30)	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45 41 16:16 (30)
11	08:00	08:26 (33)	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51 08:16 (33)
	17:06	42 16:31 (30)	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45 41 16:17 (30)
12	08:00	08:27 (33)	07:30	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:16	07:52 08:17 (33)
	17:07	39 16:30 (30)	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45 40 16:17 (30)
13	08:00	08:28 (33)	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53 08:18 (33)
	17:08	38 16:31 (30)	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45 40 16:18 (30)
14	07:59	08:30 (33)	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53 08:19 (33)
	17:09	34 16:31 (30)	17:52	3 17:28 (29)	19:28	20:06	20:43	21:10	21:09	20:35	19:41	18:44	16:45 39 16:18 (30)
15	07:59	16:05 (30)	07:26	6 17:23 (29)	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:54 08:20 (33)
	17:11	26 16:31 (30)	17:53	3 17:29 (29)	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:46 38 16:18 (30)
16	07:58	16:05 (30)	07:25	17:23 (29)	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:52 08:20 (33)
	17:12	26 16:31 (30)	17:54	8 17:31 (29)	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:46 38 16:18 (30)
17	07:57	16:06 (30)	07:23	17:21 (29)	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:56 08:21 (33)
	17:13	24 16:30 (30)	17:56	11 17:32 (29)	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	10 18:06 (29)
18	07:57	16:07 (30)	07:22	17:22 (29)	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	17:55 (29)
	17:14	24 16:31 (30)	17:57	12 17:34 (29)	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	14 18:09 (29)
19	07:56	16:08 (30)	07:20	17:21 (29)	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	17:53 (29)
	17:16	22 16:30 (30)	17:59	14 17:35 (29)	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16 18:09 (29)
20	07:55	16:09 (30)	07:18	17:21 (29)	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	17:52 (29)
	17:17	20 16:29 (30)	18:00	15 17:36 (29)	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	17 18:09 (29)
21	07:55	16:11 (30)	07:17	17:21 (29)	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	17:52 (29)
	17:18	17 16:28 (30)	18:00	17 17:38 (29)	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16 18:08 (29)
22	07:54	16:13 (30)	07:15	17:22 (29)	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	17:51 (29)
	17:20	15 16:28 (30)	18:01	17 17:39 (29)	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	15 18:06 (29)
23	07:53	16:15 (30)	07:14	17:22 (29)	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	17:52 (29)
	17:21	11 16:26 (30)	18:03	15 17:37 (29)	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	13 18:05 (29)
24	07:52	16:16 (30)	07:12	17:24 (29)	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	17:51 (29)
	17:22	18:04	13 17:37 (29)	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	12 18:03 (29)	
25	07:51	16:17 (30)	07:10	17:26 (29)	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	17:51 (29)
	17:24	18:05	8 17:34 (29)	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	10 18:01 (29)	
26	07:51	16:18 (30)	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	17:52 (29)	
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	8 18:00 (29)		
27	07:50	16:19 (30)	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	17:53 (29)	
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	5 17:58 (29)		
28	07:49	16:20 (30)	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	17:55 (29)	
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	2 17:57 (29)		
29	07:48	16:21 (30)	07:04	07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	18:09 (33)	
	17:29	18:10	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	37 16:11 (30)	
30	07:47	16:22 (30)	07:03	07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	
	17:31	18:11	19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	39 16:12 (30)	
31	07:46	16:23 (30)	07:02	07:09	05:44	05:44	06:10	06:46	07:22	08:00	07:47	07:39	
	17:32	18:12	19:49	21:00	21:14	20:53	20:06	06:10	06:46	07:22	08:00	07:47	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	1221
Total, worst case	764	139								138	295		0.49
Sun reduction	0.57	0.59								0.63	0.50		0.98
Oper. time red.	0.98	0.98								0.98	0.98		0.59
Wind dir. red.	0.59	0.55								0.55	0.57		0.29
Total reduction	0.33	0.32								0.34	0.28		0.47
Total, real	250	44								47	82		348

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H303 - H303

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June			
1	08:02	07:45	08:06 (43)	07:04	07:07	07:28 (28)	06:17	05:44	
	16:56	17:33	27 17:07 (40)	18:11	19:51	29 07:57 (28)	20:28	21:01	
2	08:02	07:43	08:07 (43)	07:02	07:06	07:26 (28)	06:15	05:43	
	16:57	17:35	28 17:09 (40)	18:12	19:52	31 07:57 (28)	20:29	21:02	
3	08:02	07:42	08:09 (43)	07:00	07:04	07:25 (28)	06:14	05:43	20:29 (25)
	16:57	17:36	28 17:11 (40)	18:14	19:53	32 07:57 (28)	20:30	21:03	4 20:33 (25)
4	08:02	07:41	08:10 (43)	06:59	07:02	07:24 (28)	06:12	05:42	20:27 (25)
	16:58	17:38	28 17:13 (40)	18:15	19:54	33 07:57 (28)	20:31	21:04	10 20:37 (25)
5	08:02	07:40	08:11 (43)	06:57	07:00	07:24 (28)	06:11	05:42	20:25 (25)
	16:59	17:39	26 17:13 (40)	18:16	19:55	32 07:56 (28)	20:32	21:05	13 20:38 (25)
6	08:02	07:39	08:14 (43)	06:55	06:58	07:23 (28)	06:10	05:42	20:25 (25)
	17:00	17:41	23 17:15 (40)	18:18	19:57	32 07:55 (28)	20:34	21:05	14 20:39 (25)
7	08:01	07:37	17:00 (40)	06:53	06:57	07:24 (28)	06:08	05:41	20:24 (25)
	17:01	17:42	17 17:17 (40)	18:19	19:58	32 07:56 (28)	20:35	21:06	16 20:40 (25)
8	08:01	07:36	17:00 (40)	07:52	06:55	07:24 (28)	06:07	05:41	20:24 (25)
	17:03	17:43	18 17:18 (40)	18:20	19:59	31 07:55 (28)	20:36	21:07	17 20:41 (25)
9	08:01	07:35	17:01 (40)	07:50	06:53	07:24 (28)	06:06	05:41	20:23 (25)
	17:04	17:45	17 17:18 (40)	19:21	20:00	30 07:54 (28)	20:37	21:08	18 20:41 (25)
10	08:01	07:33	17:02 (40)	07:48	06:51	07:24 (28)	06:04	05:40	20:23 (25)
	17:05	17:46	16 17:18 (40)	19:23	20:02	28 07:52 (28)	20:38	21:08	18 20:41 (25)
11	08:00	07:32	17:02 (40)	07:46	06:49	07:25 (28)	06:03	05:40	20:22 (25)
	17:06	17:48	14 17:16 (40)	19:24	20:03	27 07:52 (28)	20:40	21:09	20 20:42 (25)
12	08:00	07:31	17:05 (40)	07:44	06:48	07:26 (28)	06:02	05:40	20:22 (25)
	17:07	17:49	10 17:15 (40)	19:25	20:04	24 07:50 (28)	20:41	21:09	21 20:43 (25)
13	08:00	07:29	17:07 (40)	07:43	06:46	07:27 (28)	06:01	05:40	20:22 (25)
	17:08	17:50	5 17:12 (40)	19:27	20:05	21 07:48 (28)	20:42	21:10	21 20:43 (25)
14	07:59	07:28		07:41	06:44	07:28 (28)	06:00	05:40	20:22 (25)
	17:09	17:52		19:28	20:07	18 07:46 (28)	20:43	21:10	22 20:44 (25)
15	07:59	07:26		07:39	06:42	07:31 (28)	05:58	05:40	20:22 (25)
	17:11	17:53		19:29	20:08	12 07:43 (28)	20:44	21:11	22 20:44 (25)
16	07:58	07:25		07:37	06:41		05:57	05:40	20:22 (25)
	17:12	17:55		19:30	20:09		20:45	21:11	23 20:45 (25)
17	07:58	07:23		07:35	06:39		05:56	05:40	20:22 (25)
	17:13	17:56		19:32	20:10		20:46	21:12	23 20:45 (25)
18	07:57	07:22		07:33	06:37		05:55	05:40	20:22 (25)
	17:14	17:57		19:33	20:12		20:47	21:12	23 20:45 (25)
19	07:56	07:20		07:32	06:36		05:54	05:40	20:22 (25)
	17:16	17:59		19:34	20:13		20:49	21:13	23 20:45 (25)
20	07:56	08:18 (43)	07:19	07:30	06:34		05:53	05:40	20:22 (25)
	17:17	1 08:19 (43)	18:00	19:36	20:14		20:50	21:13	23 20:45 (25)
21	07:55	08:18 (43)	07:17	07:28	06:32		05:52	05:40	20:22 (25)
	17:18	4 08:22 (43)	18:00	19:37	20:15		20:51	21:13	23 20:45 (25)
22	07:54	08:17 (43)	07:15	07:26	06:31		05:51	05:40	20:23 (25)
	17:20	6 08:23 (43)	18:01	19:38	20:16		20:52	21:13	23 20:46 (25)
23	07:53	08:16 (43)	07:14	07:24	06:29		05:50	05:41	20:23 (25)
	17:21	8 08:24 (43)	18:03	19:39	20:18		20:53	21:14	23 20:46 (25)
24	07:52	08:15 (43)	07:12	07:22	06:27		05:50	05:41	20:23 (25)
	17:22	10 08:25 (43)	18:04	19:41	20:19		20:54	21:14	23 20:46 (25)
25	07:52	08:14 (43)	07:10	07:20	06:26		05:49	05:41	20:24 (25)
	17:24	11 08:25 (43)	18:06	19:42	20:20		20:55	21:14	23 20:47 (25)
26	07:51	08:13 (43)	07:09	07:19	07:39 (28)	06:24	05:48	05:42	20:24 (25)
	17:25	13 08:26 (43)	18:07	19:43	10 07:49 (28)	20:21	20:56	21:14	23 20:47 (25)
27	07:50	08:12 (43)	07:07	07:17	07:37 (28)	06:23	05:47	05:42	20:24 (25)
	17:27	14 08:26 (43)	18:08	19:44	15 07:52 (28)	20:23	20:57	21:14	22 20:46 (25)
28	07:49	08:11 (43)	07:05	07:15	07:35 (28)	06:21	05:46	05:42	20:25 (25)
	17:28	16 08:27 (43)	18:10	19:46	18 07:53 (28)	20:24	20:58	21:14	22 20:47 (25)
29	07:48	08:10 (43)		07:13	07:33 (28)	06:20	05:46	05:43	20:25 (25)
	17:29	17 08:27 (43)		19:47	22 07:55 (28)	20:25	20:59	21:14	21 20:46 (25)
30	07:47	08:09 (43)		07:11	07:31 (28)	06:18	05:45	05:43	20:26 (25)
	17:31	20 17:05 (40)		19:48	24 07:55 (28)	20:26	21:00	21:14	21 20:47 (25)
31	07:46	08:08 (43)		07:09	07:29 (28)		05:44		
	17:32	24 17:07 (40)		19:49	27 07:56 (28)		21:01		
Potential sun hours	287	292	369	403	458	464			
Total, worst case	144	257	116	412		555			
Sun reduction	0.57	0.59	0.59	0.61		0.70			
Oper. time red.	0.98	0.98	0.98	0.98		0.98			
Wind dir. red.	0.68	0.60	0.59	0.59		0.68			
Total reduction	0.38	0.35	0.34	0.35		0.47			
Total, real	54	89	39	144		259			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H303 - H303

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December						
1	05:44	20:26 (25)	06:11	06:47	07:24 (28)	07:22	07:02	16:30 (40)	07:41			
	21:14	20	20:46 (25)	20:52	20:05	27	07:51 (28)	19:09	17:15	17	16:47 (40)	16:47
2	05:44	20:28 (25)	06:12	06:48	07:23 (28)	07:23	07:03	16:30 (40)	07:42			
	21:14	19	20:47 (25)	20:51	20:03	28	07:51 (28)	19:07	17:14	18	16:48 (40)	16:47
3	05:45	20:28 (25)	06:13	06:49	07:22 (28)	07:25	07:04	16:29 (40)	07:43			
	21:14	18	20:46 (25)	20:50	20:01	30	07:52 (28)	19:05	17:13	18	16:47 (40)	16:46
4	05:46	20:29 (25)	06:14	06:50	07:21 (28)	07:26	07:06	16:30 (40)	07:44			
	21:13	17	20:46 (25)	20:49	19:59	31	07:52 (28)	19:03	17:11	17	16:47 (40)	16:46
5	05:46	20:29 (25)	06:16	06:52	07:20 (28)	07:27	07:07	07:43 (43)	07:45			
	21:13	16	20:45 (25)	20:47	19:57	32	07:52 (28)	19:02	17:10	24	16:45 (40)	16:46
6	05:47	20:30 (25)	06:17	06:53	07:19 (28)	07:28	07:08	07:41 (43)	07:46			
	21:13	15	20:45 (25)	20:46	19:56	33	07:52 (28)	19:00	17:09	27	16:44 (40)	16:46
7	05:48	20:32 (25)	06:18	06:54	07:19 (28)	07:29	07:10	07:40 (43)	07:47			
	21:12	13	20:45 (25)	20:45	19:54	32	07:51 (28)	18:56	17:07	27	16:42 (40)	16:45
8	05:48	20:33 (25)	06:19	06:55	07:19 (28)	07:31	07:11	07:39 (43)	07:48			
	21:12	11	20:44 (25)	20:43	19:52	33	07:52 (28)	18:54	17:06	28	16:41 (40)	16:45
9	05:49	20:35 (25)	06:20	06:56	07:19 (28)	07:32	07:13	07:38 (43)	07:49			
	21:12	7	20:42 (25)	20:42	19:50	32	07:51 (28)	18:53	17:05	28	16:40 (40)	16:45
10	05:50	20:41	06:21	06:57	07:19 (28)	07:33	07:14	07:37 (43)	07:50			
	21:11	20:41	19:48	31	07:50 (28)	18:51	17:04	27	16:38 (40)	16:45		
11	05:51	20:42	06:22	06:59	07:20 (28)	07:34	07:15	07:39 (43)	07:51			
	21:11	20:39	19:46	29	07:49 (28)	18:49	17:03	23	16:37 (40)	16:45		
12	05:51	20:43	06:24	07:00	07:21 (28)	07:36	07:17	07:40 (43)	07:52			
	21:10	20:38	19:45	27	07:48 (28)	18:47	17:01	20	16:36 (40)	16:45		
13	05:52	20:44	06:25	07:01	07:22 (28)	07:37	07:18	07:42 (43)	07:53			
	21:10	20:36	19:43	25	07:47 (28)	18:45	17:00	17	07:59 (43)	16:45		
14	05:53	20:45	06:26	07:02	07:23 (28)	07:38	07:19	07:43 (43)	07:53			
	21:09	20:35	19:41	22	07:45 (28)	18:44	16:59	16	07:59 (43)	16:46		
15	05:54	20:46	06:27	07:03	07:24 (28)	07:39	07:21	07:45 (43)	07:54			
	21:08	20:33	19:39	19	07:43 (28)	18:42	16:58	14	07:59 (43)	16:46		
16	05:55	20:47	06:28	07:04	07:26 (28)	07:41	07:22	07:46 (43)	07:55			
	21:08	20:32	19:37	16	07:42 (28)	18:40	16:57	13	07:59 (43)	16:46		
17	05:56	20:48	06:29	07:06	07:27 (28)	07:42	07:23	07:47 (43)	07:56			
	21:07	20:30	19:35	11	07:38 (28)	18:39	16:56	11	07:58 (43)	16:46		
18	05:57	20:49	06:31	07:07	07:28 (28)	07:43	07:25	07:49 (43)	07:56			
	21:06	20:28	19:33	18:37	16:55	10	07:59 (43)	16:47				
19	05:58	20:50	06:32	07:08	07:29 (28)	07:45	07:26	07:50 (43)	07:57			
	21:05	20:27	19:31	18:35	16:55	8	07:58 (43)	16:47				
20	05:59	20:51	06:33	07:09	07:30 (28)	07:46	07:27	07:52 (43)	07:58			
	21:05	20:25	19:30	18:34	16:54	6	07:58 (43)	16:47				
21	05:59	20:52	06:34	07:10	07:31 (28)	07:47	07:28	07:53 (43)	07:58			
	21:04	20:24	19:28	18:32	16:53	4	07:57 (43)	16:48				
22	06:00	20:53	06:35	07:11	07:32 (28)	07:48	07:30	07:54 (43)	07:59			
	21:03	20:22	19:26	18:30	16:52	2	07:56 (43)	16:48				
23	06:01	20:54	06:36	07:13	07:33 (28)	07:50	07:31	07:59 (43)	07:59			
	21:02	20:20	19:24	18:29	16:51	16:49						
24	06:03	20:55	06:38	07:14	07:34 (28)	07:51	07:32	08:00				
	21:01	20:19	19:22	18:27	16:51	16:49						
25	06:04	20:56	06:39	07:15	07:35 (28)	07:52	07:34	08:00				
	21:00	20:17	19:20	18:26	16:50	16:50						
26	06:05	20:57	06:40	07:16	07:36 (28)	07:54	07:35	08:00				
	20:59	20:15	19:18	18:24	16:49	16:51						
27	06:06	20:58	06:41	07:17	07:37 (28)	07:55	07:36	08:01				
	20:58	20:13	19:16	18:23	16:49	16:51						
28	06:07	20:59	06:42	07:19	07:38 (28)	07:56	07:37	08:01				
	20:57	20:12	12	07:44 (28)	19:15	18:21	16:48	16:52				
29	06:08	21:00	06:43	07:20 (28)	07:20	07:58	17:36 (40)	07:38	08:01			
	20:56	20:10	18	07:47 (28)	19:13	18:20	6	17:42 (40)	16:48			
30	06:09	21:01	06:45	07:21 (28)	07:21	07:59	17:34 (40)	07:40	08:01			
	20:55	20:08	21	07:48 (28)	19:11	18:18	11	17:45 (40)	16:47			
31	06:10	21:02	06:46	07:22 (28)	07:22	08:00	17:32 (40)	08:02				
	20:54	20:06	24	07:50 (28)	19:10	18:17	14	17:46 (40)	16:54			
Potential sun hours	471	435	377	341	289	276						
Total, worst case	136	75	458	31	375							
Sun reduction	0.76	0.74	0.69	0.63	0.50							
Oper. time red.	0.98	0.98	0.98	0.98	0.98							
Wind dir. red.	0.68	0.59	0.59	0.56	0.63							
Total reduction	0.51	0.42	0.39	0.34	0.31							
Total, real	69	32	181	11	116							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H305 - H305

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02	07:45	07:04		07:08	06:17	
	16:56	17:34	18:11		19:51	20:28	
2	08:02	07:44	07:02	17:49 (23)	07:06	06:15	28
	16:57	17:35	18:12	17:51 (23)	19:52	20:29	29
3	08:02	07:42	07:00	17:46 (23)	07:04	06:14	
	16:58	17:36	18:14	17:52 (23)	19:53	20:30	31
4	08:02	07:41	06:59	17:44 (23)	07:02	06:12	
	16:58	17:38	18:15	17:53 (23)	19:54	20:31	32
5	08:02	07:40	06:57	17:43 (23)	07:00	06:11	
	16:59	17:39	18:16	17:54 (23)	19:56	20:32	33
6	08:02	07:39	06:55	17:43 (23)	06:58	06:10	
	17:00	17:41	18:18	17:57 (23)	19:57	20:34	34
7	08:02	07:37	06:53	17:43 (23)	06:57	06:08	
	17:02	17:42	18:19	17:58 (23)	19:58	20:35	35
8	08:01	07:36	07:52	18:42 (23)	06:55	06:07	
	17:03	17:43	18:20	18:59 (23)	19:59	20:36	36
9	08:01	07:35	07:50	18:42 (23)	06:53	06:06	
	17:04	17:45	19:22	18:59 (23)	20:01	20:37	37
10	08:01	07:33	07:48	18:43 (23)	06:51	06:04	
	17:05	17:46	19:23	18:58 (23)	20:02	20:38	37
11	08:00	07:32	07:46	18:45 (23)	06:50	06:03	
	17:06	17:48	19:24	18:57 (23)	20:03	20:40	37
12	08:00	07:31	07:44	18:46 (23)	06:48	06:02	
	17:07	17:49	19:25	18:55 (23)	20:04	20:41	38
13	08:00	07:29	07:43		06:46	06:01	
	17:08	17:50	19:27		20:05	20:42	38
14	07:59	07:28	07:41		06:44	06:00	
	17:10	17:52	19:28		20:07	20:43	38
15	07:59	07:26	07:39		06:43	05:58	
	17:11	17:53	19:29		20:08	20:44	37
16	07:58	07:25	07:37		06:41	05:57	
	17:12	17:55	19:31		20:09	20:45	38
17	07:58	07:23	07:35		06:39	05:56	
	17:13	17:56	19:32		20:10	20:46	38
18	07:57	07:22	07:33		06:37	05:55	
	17:15	17:57	19:33		20:12	20:48	38
19	07:56	07:20	07:32		06:36	05:54	
	17:16	17:59	19:34		20:13	20:49	38
20	07:56	07:19	07:30	07:50 (25)	06:34	05:53	
	17:17	18:00	19:36	07:52 (25)	20:14	20:50	37
21	07:55	07:17	07:28	07:48 (25)	06:32	05:52	
	17:18	18:00	19:37	07:52 (25)	20:15	20:51	37
22	07:54	07:15	07:26	07:46 (25)	06:31	05:51	06:14 (24)
	17:20	18:02	19:38	07:53 (25)	20:17	20:52	20:27 (22)
23	07:53	07:14	07:24	07:44 (25)	06:29	05:50	06:13 (24)
	17:21	18:03	19:39	07:53 (25)	20:18	20:53	20:28 (22)
24	07:53	07:12	07:22	07:42 (25)	06:28	05:50	06:12 (24)
	17:22	18:04	19:41	07:52 (25)	20:19	20:54	20:28 (22)
25	07:52	07:11	07:20	07:41 (25)	06:26	05:49	06:12 (24)
	17:24	18:06	19:42	07:53 (25)	20:20	20:55	20:30 (22)
26	07:51	07:09	07:19	07:39 (25)	06:24	05:48	06:11 (24)
	17:25	18:07	19:43	07:52 (25)	20:21	20:56	20:31 (22)
27	07:50	07:07	07:17	07:37 (25)	06:23	05:47	06:10 (24)
	17:27	18:08	19:44	07:50 (25)	20:23	20:57	20:31 (22)
28	07:49	07:06	07:15	07:36 (25)	06:21	05:47	06:10 (24)
	17:28	18:10	19:46	07:48 (25)	20:24	20:58	20:33 (22)
29	07:48		07:13	07:38 (25)	06:20	05:46	06:09 (24)
	17:29		19:47	07:46 (25)	20:25	20:59	20:33 (22)
30	07:47		07:11		06:18	05:45	06:08 (24)
	17:31		19:48		20:26	21:00	20:34 (22)
31	07:46		07:09			05:45	06:08 (24)
	17:32		19:49			21:01	20:35 (22)
Potential sun hours	287	292	369	403	458	464	
Total, worst case			217		158	1085	
Sun reduction			0.59		0.65	0.70	
Oper. time red.			0.98		0.98	0.98	
Wind dir. red.			0.56		0.61	0.61	
Total reduction			0.33		0.39	0.42	
Total, real			71		62	452	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H305 - H305

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:08 (24)	06:11	06:47	07:22	18:27 (23)
	21:14	20:46 (22)	20:52	20:05	19:09	17:15
2	05:44	06:09 (24)	06:12	06:48	07:23	18:23 (23)
	21:14	20:47 (22)	20:51	20:03	19:07	17:14
3	05:45	06:09 (24)	06:13	06:49	07:25	18:22 (23)
	21:14	20:46 (22)	20:50	20:01	19:05	17:13
4	05:46	06:10 (24)	06:15	06:50	07:26	18:21 (23)
	21:13	20:46 (22)	20:49	19:59	19:04	17:11
5	05:46	06:11 (24)	06:16	06:52	07:27	18:19 (23)
	21:13	20:46 (22)	20:47	19:58	19:02	17:10
6	05:47	06:11 (24)	06:17	06:53	07:28	18:19 (23)
	21:13	20:45 (22)	20:46	19:56	19:00	17:09
7	05:48	06:12 (24)	06:18	06:54	07:30	18:19 (23)
	21:13	20:45 (22)	20:45	19:54	18:56	17:07
8	05:48	06:13 (24)	06:19	06:55	07:31	18:19 (23)
	21:12	20:45 (22)	20:43	19:52	18:54	17:06
9	05:49	06:13 (24)	06:20	06:56	07:32	18:19 (23)
	21:12	20:44 (22)	20:42	19:50	18:53	17:05
10	05:50	06:14 (24)	06:21	06:57	07:33	18:19 (23)
	21:11	20:44 (22)	20:41	19:48	18:51	17:04
11	05:51	06:15 (24)	06:23	06:59	07:34	18:21 (23)
	21:11	20:44 (22)	20:39	19:47	18:49	17:03
12	05:51	06:16 (24)	06:24	07:00	07:36	18:26 (23)
	21:10	20:44 (22)	20:38	19:45	18:47	17:02
13	05:52	06:16 (24)	06:25	07:01	07:37	18:26 (23)
	21:10	20:42 (22)	20:36	19:43	18:46	17:00
14	05:53	06:17 (24)	06:26	07:02	07:38	18:27 (23)
	21:09	20:42 (22)	20:35	19:41	18:44	16:59
15	05:54	06:18 (24)	06:27	07:03	07:39	18:28 (23)
	21:08	20:41 (22)	20:33	19:39	18:42	16:58
16	05:55	06:19 (24)	06:28	07:04	07:40	18:29 (23)
	21:08	20:41 (22)	20:32	19:37	18:40	16:57
17	05:56	06:20 (24)	06:29	07:06	07:41	18:30 (23)
	21:07	20:40 (22)	20:30	19:35	18:39	16:56
18	05:57	06:21 (24)	06:31	07:07	07:42	18:31 (23)
	21:06	20:40 (22)	20:28	19:33	18:37	16:55
19	05:58	06:22 (24)	06:32	07:08	07:43	18:32 (23)
	21:06	20:39 (22)	20:27	19:32	18:35	16:54
20	05:59	06:23 (24)	06:33	07:09	07:44	18:33 (23)
	21:05	20:38 (22)	20:25	19:30	18:34	16:53
21	06:00	06:23 (24)	06:34	07:10	07:45	18:34 (23)
	21:04	20:37 (22)	20:24	19:28	18:32	16:52
22	06:01		06:35	07:11	07:46	18:35 (23)
	21:03		20:22	19:26	18:30	16:51
23	06:02		06:36	07:13	07:47	18:36 (23)
	21:02		20:20	19:24	18:29	16:50
24	06:03		06:38	07:14	07:48	18:37 (23)
	21:01		20:19	19:22	18:27	16:49
25	06:04		06:39	07:15	07:49	18:38 (23)
	21:00		20:17	19:20	18:26	16:48
26	06:05		06:40	07:16	07:50	18:39 (23)
	20:59		20:15	19:18	18:24	16:47
27	06:06		06:41	07:17	07:51	18:40 (23)
	20:58		20:14	19:16	18:23	16:46
28	06:07		06:42	07:19	07:52	18:41 (23)
	20:57		20:12	19:15	18:21	16:45
29	06:08		06:43	07:20	07:53	18:42 (23)
	20:56		20:10	19:13	18:20	16:44
30	06:09		06:45	07:21	07:54	18:43 (23)
	20:55		20:08	19:11	18:18	16:43
31	06:10		06:46		08:00	18:44 (23)
	20:54		20:07		18:17	16:55
Potential sun hours	471	435	377	341	289	276
Total, worst case	538		90	126		
Sun reduction	0.76		0.69	0.63		
Oper. time red.	0.98		0.98	0.98		
Wind dir. red.	0.61		0.60	0.54		
Total reduction	0.45		0.40	0.33		
Total, real	245		36	42		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H307 - H307

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 948 364 341 373 483 625 1,207 923 579 685 869 1,169 8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:24 (24) 07:39 (24)	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09	18:30 (22) 17:15	07:02 16:47
2	08:02 16:57	07:44 17:35	07:02 18:12	07:23 (24) 07:39 (24)	07:06 19:52	06:15 20:29	05:43 21:02	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	18:32 (22) 18:42 (22)	07:03 17:14
3	08:02 16:58	07:42 17:36	07:00 18:14	07:21 (24) 07:39 (24)	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	18:42 (22) 17:13	07:05 16:46
4	08:02 16:58	07:41 17:38	06:59 18:15	07:19 (24) 07:38 (24)	07:02 19:54	06:12 20:31	05:42 21:04	05:46 21:13	06:15 20:49	06:51 19:59	07:26 19:04	18:30 (22) 17:11	07:06 16:46
5	08:02 16:59	07:40 17:39	06:57 18:16	07:18 (24) 07:36 (24)	07:00 19:56	06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:47	06:52 19:58	07:27 19:02	18:32 (22) 17:10	07:07 16:46
6	08:02 17:00	07:39 17:41	06:55 18:18	07:20 (24) 07:36 (24)	06:58 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	18:30 (22) 17:09	07:09 16:46
7	08:02 17:02	07:37 17:42	06:53 18:19	07:21 (24) 07:34 (24)	06:57 19:58	06:08 20:35	05:41 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	18:30 (22) 17:07	07:10 16:46
8	08:01 17:03	07:36 17:43	07:52 18:20	08:24 (24) 08:30 (24)	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:31 18:54	18:30 (22) 17:06	07:11 16:45
9	08:01 17:04	07:35 17:45	07:50 19:22	08:30 (24)	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53	18:30 (22) 17:05	07:13 16:45
10	08:01 17:05	07:33 17:46	07:48 19:23		06:51 20:02	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:41	06:57 19:48	07:33 18:51	18:30 (22) 17:04	07:14 16:45
11	08:01 17:06	07:32 17:48	07:46 19:24	18:56 (22)	06:50 20:03	06:03 20:40	05:40 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:34 18:49	18:30 (22) 17:03	07:15 16:45
12	08:00 17:07	07:31 17:49	07:44 19:25	19:03 (22)	06:48 20:04	06:02 20:41	05:40 21:10	05:51 21:10	06:24 20:38	07:00 19:45	07:36 18:47	18:30 (22) 17:02	07:17 16:45
13	08:00 17:08	07:29 17:50	07:43 19:27	18:50 (22)	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46	18:30 (22) 17:01	07:18 16:46
14	08:00 17:10	07:28 17:52	07:41 19:28	18:49 (22)	06:44 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	18:30 (22) 17:00	07:19 16:46
15	08:00 17:11	07:26 17:53	07:39 19:29	18:47 (22)	06:43 20:08	05:58 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:03 19:39	07:40 18:42	18:30 (22) 17:00	07:21 16:46
16	08:00 17:12	07:25 17:55	07:37 19:31	18:46 (22)	06:41 20:09	05:57 20:45	05:40 21:12	05:55 21:08	06:28 20:32	07:04 19:37	07:41 18:40	18:30 (22) 17:00	07:22 16:46
17	08:00 17:13	07:23 17:56	07:35 19:32	18:47 (22)	06:39 20:10	05:56 20:47	05:40 21:12	05:56 21:07	06:29 20:30	07:06 19:35	07:42 18:39	18:30 (22) 17:00	07:23 16:46
18	08:00 17:15	07:22 17:57	07:33 19:33	18:46 (22)	06:37 20:12	05:55 20:48	05:40 21:12	05:57 21:06	06:31 20:29	07:07 19:33	07:43 18:37	18:39 (22) 17:00	07:25 16:47
19	08:00 17:16	07:20 17:59	07:32 19:34	18:46 (22)	06:36 20:13	05:54 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:35	18:36 (22) 17:00	07:26 16:47
20	08:00 17:17	07:19 18:00	07:30 19:36	19:10 (22)	06:34 20:14	05:53 20:50	05:40 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34	18:37 (22) 17:00	07:27 16:47
21	08:00 17:18	07:17 18:00	07:28 19:37	18:46 (22)	06:32 20:15	05:52 20:51	05:40 21:13	06:00 21:04	06:34 20:24	07:10 19:28	07:47 18:32	18:38 (22) 17:00	07:29 16:48
22	08:00 17:20	07:16 18:02	07:26 19:37	18:46 (22)	06:31 20:17	05:51 20:52	05:40 21:14	06:01 21:03	06:35 20:22	07:11 19:26	07:49 18:30	18:39 (22) 17:00	07:30 16:48
23	08:00 17:21	07:14 18:03	07:24 19:39	18:47 (22)	06:29 20:18	05:50 20:53	05:41 21:14	06:02 21:02	06:36 20:20	07:13 19:24	07:50 18:33	18:30 (22) 17:00	07:31 16:49
24	08:00 17:22	07:12 18:04	07:22 19:39	19:05 (22)	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:34	18:32 (22) 17:00	07:32 16:50
25	08:00 17:25	07:11 18:06	07:21 19:42	18:51 (22)	06:26 20:20	05:49 20:55	05:41 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:52 18:34	18:29 (22) 17:00	07:34 16:50
26	08:00 17:26	07:09 18:07	07:19 19:43	19:01 (22)	06:24 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:54 18:24	18:28 (22) 17:00	07:35 16:51
27	08:00 17:27	07:07 18:08	07:17 19:44	07:28 (24)	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:17 19:17	07:55 18:23	18:28 (22) 17:00	07:36 16:51
28	08:00 17:28	07:06 18:10	07:15 19:46	07:26 (24)	06:21 20:24	05:46 20:58	05:42 21:14	06:07 20:57	06:42 20:12	07:19 19:15	07:56 18:21	18:29 (22) 17:00	07:37 16:52
29	08:00 17:29	07:05 18:11	07:14 19:47	07:25 (24)	06:20 20:25	05:45 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:57 18:20	18:29 (22) 17:00	07:39 16:53
30	08:00 17:31	07:04 18:13	07:13 19:48	07:24 (24)	06:19 20:26	05:44 21:00	05:43 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	18:29 (22) 17:00	07:40 16:54
31	08:00 17:32	07:03 18:14	07:12 19:49	07:23 (24)	06:18 20:27	05:43 21:01	05:43 21:14	06:09 20:54	06:46 20:07	07:22 19:11	08:00 18:17	18:28 (22) 17:00	08:02 16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	257	184	289	276
Total, worst case			398							69	184		
Sun reduction		41	0.59							0.69	0.63		
Oper. time red.		0.98	0.98							0.98	0.98		
Wind dir. red.		0.62	0.58							0.57	0.62		
Total reduction		0.36	0.34							0.38	0.38		
Total, real		15	134							98	70		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H308 - H308

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.57 0.59 0.59 0.61 0.65 0.70 0.76 0.74 0.69 0.63 0.50 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 948 364 341 373 483 625 1,207 923 579 685 869 1,169 8,564
 Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:02	07:45	07:04	07:08	06:17	05:44	06:07 (22)	05:44	06:09 (22)	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	43 06:50 (22)	21:14	48 06:57 (22)	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	06:07 (22)	05:45	06:10 (22)	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	44 06:51 (22)	21:14	48 06:58 (22)	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	06:06 (22)	05:45	06:10 (22)	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	44 06:50 (22)	21:14	47 06:57 (22)	20:50	20:01	19:05	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	06:06 (22)	05:46	06:10 (22)	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	45 06:51 (22)	21:14	48 06:58 (22)	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	06:06 (22)	05:46	06:11 (22)	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	46 06:52 (22)	21:13	47 06:58 (22)	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	06:05 (22)	05:47	06:11 (22)	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	46 06:51 (22)	21:13	47 06:58 (22)	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	06:05 (22)	05:48	06:12 (22)	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	47 06:52 (22)	21:13	46 06:58 (22)	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	06:05 (22)	05:48	06:13 (22)	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	48 06:53 (22)	21:12	45 06:58 (22)	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	06:05 (22)	05:49	06:13 (22)	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	48 06:53 (22)	21:12	45 06:58 (22)	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	06:05 (22)	05:50	06:14 (22)	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	47 06:52 (22)	21:11	44 06:58 (22)	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	06:05 (22)	05:51	06:15 (22)	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	48 06:53 (22)	21:11	43 06:58 (22)	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	06:05 (22)	05:51	06:16 (22)	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	48 06:53 (22)	21:10	42 06:58 (22)	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	06:05 (22)	05:52	06:16 (22)	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	49 06:54 (22)	21:10	41 06:57 (22)	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	06:06 (22)	05:53	06:17 (22)	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	9 06:31 (22)	21:11	48 06:54 (22)	21:09	40 06:57 (22)	20:35	19:41	18:44	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	06:21 (22)	05:40	06:18 (22)	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	14 06:35 (22)	21:11	48 06:54 (22)	21:09	39 06:57 (22)	20:33	19:39	18:42	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	06:19 (22)	05:55	06:19 (22)	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	17 06:36 (22)	21:12	48 06:54 (22)	21:08	38 06:57 (22)	20:32	19:37	18:40	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	06:18 (22)	05:56	06:20 (22)	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	20 06:38 (22)	21:12	49 06:55 (22)	21:07	37 06:57 (22)	20:30	19:35	18:39	16:47
18	07:57	07:22	07:34	06:37	05:55	05:40	06:18 (22)	05:57	06:21 (22)	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	23 06:41 (22)	21:12	49 06:55 (22)	21:06	36 06:57 (22)	20:29	19:33	18:37	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	06:17 (22)	05:58	06:22 (22)	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	25 06:42 (22)	21:13	49 06:55 (22)	21:06	34 06:56 (22)	20:27	19:32	18:35	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	06:16 (22)	05:59	06:23 (22)	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	27 06:43 (22)	21:13	49 06:55 (22)	21:05	33 06:56 (22)	20:25	19:30	18:34	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:15 (22)	05:40	06:24 (22)	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	29 06:44 (22)	21:13	49 06:56 (22)	21:04	31 06:55 (22)	20:24	19:28	18:32	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:14 (22)	05:41	06:24 (22)	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	30 06:44 (22)	21:14	49 06:56 (22)	21:03	30 06:54 (22)	20:22	19:26	18:31	16:52
23	07:53	07:14	07:24	06:29	05:51	05:41	06:13 (22)	05:41	06:25 (22)	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	32 06:45 (22)	21:14	49 06:56 (22)	21:02	28 06:53 (22)	20:20	19:24	18:29	16:52
24	07:53	07:12	07:22	06:28	05:50	05:41	06:07 (22)	06:03	06:26 (22)	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	33 06:45 (22)	21:14	49 06:56 (22)	21:01	26 06:52 (22)	20:19	19:22	18:27	16:51
25	07:52	07:11	07:21	06:26	05:49	05:41	06:12 (22)	05:41	06:27 (22)	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	35 06:47 (22)	21:14	49 06:57 (22)	21:00	24 06:51 (22)	20:17	19:20	18:26	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:11 (22)	05:42	06:28 (22)	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	36 06:47 (22)	21:14	48 06:56 (22)	20:59	21 06:49 (22)	20:15	19:18	18:24	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:10 (22)	05:42	06:29 (22)	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	37 06:47 (22)	21:14	48 06:56 (22)	20:58	19 06:48 (22)	20:14	19:17	18:23	16:49
28	07:49	07:06	07:15	06:21	05:47	05:43	06:10 (22)	05:43	06:09 (22)	06:07	06:30 (22)	06:42	07:19	07:37
	17:28	18:10	19:46	20:24	20:58	39 06:49 (22)	21:14	48 06:57 (22)	20:57	16 06:46 (22)	20:12	19:15	18:21	16:49
29	07:48	07:13	07:20	06:20	05:46	05:43	06:09 (22)	06:08	06:31 (22)	06:44	07:20	07:58	07:39	08:01
	17:29	18:11	19:47	20:25	20:59	40 06:49 (22)	21:14	48 06:57 (22)	20:56	12 06:43 (22)	20:10	19:13	18:20	16:48
30	07:47	07:11	07:18	06:18	05:45	05:43	06:08 (22)	05:43	06:09 (22)	06:09	06:35 (22)	06:45	07:21	07:59
	17:31	18:13	19:48	20:26	21:00	41 06:49 (22)	21:14	48 06:57 (22)	20:55	4 06:39 (22)	20:08	19:11	18:18	16:48
31	07:46	07:10	07:17	06:17	05:45	05:43	06:08 (22)	05:43	06:10	06:46	07:22	08:01	07:40	08:02
	17:32	18:14	19:49	20:27	21:01	42 06:50 (22)	21:14	48 06:57 (22)	20:54	20:07	20:07	18:17	17:24	16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276		
Total, worst case					529	1428	1059							
Sun reduction					0.65	0.70	0.76							
Oper. time red.					0.98	0.98	0.98							
Wind dir. red.					0.56	0.56	0.56							
Total reduction					0.36	0.38	0.42							
Total, real					188	546	440							

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H309 - H309

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02	08:32 (23)	07:45	07:04	07:08	06:17
	16:56	22 08:54 (23)	17:34	18:11	19:51	20:28
2	08:02	08:32 (23)	07:44	07:02	07:06	06:15
	16:57	23 08:55 (23)	17:35	18:12	19:52	20:29
3	08:02	08:33 (23)	07:42	07:01	07:04	06:14
	16:58	22 08:55 (23)	17:36	18:14	19:53	20:30
4	08:02	08:34 (23)	07:41	06:59	07:02	06:13
	16:59	21 08:55 (23)	17:38	18:15	19:54	20:31
5	08:02	08:35 (23)	07:40	06:57	07:00	06:11
	17:00	21 08:56 (23)	17:39	18:16	19:56	20:33
6	08:02	08:36 (23)	07:39	06:55	06:59	06:10
	17:01	20 08:56 (23)	17:41	18:18	19:57	20:34
7	08:02	08:37 (23)	07:38	06:53	06:57	06:08
	17:02	19 08:56 (23)	17:42	18:19	19:58	20:35
8	08:01	08:37 (23)	07:36	07:52	06:55	06:07
	17:03	18 08:55 (23)	17:44	18:20	19:59	20:36
9	08:01	08:38 (23)	07:35	07:50	06:53	06:06
	17:04	17 08:55 (23)	17:45	19:22	20:01	20:37
10	08:01	08:40 (23)	07:34	07:48	06:51	06:05
	17:05	15 08:55 (23)	17:46	19:23	20:02	20:39
11	08:01	08:41 (23)	07:32	07:46	06:50	06:03
	17:06	13 08:54 (23)	17:48	19:24	20:03	20:40
12	08:00	08:43 (23)	07:31	07:45	06:48	06:02
	17:07	11 08:54 (23)	17:49	19:26	20:04	20:41
13	08:00	08:44 (23)	07:29	07:43	06:46	06:01
	17:08	8 08:52 (23)	17:51	19:27	20:06	20:42
14	07:59		07:28	07:41	06:44	06:00
	17:10		17:52	19:28	20:07	20:43
15	07:59		07:26	07:39	06:43	05:59
	17:11		17:53	19:29	20:08	20:44
16	07:58		07:25	07:37	06:41	05:57
	17:12		17:55	19:31	20:09	20:45
17	07:58		07:23	07:35	06:39	07:00 (22)
	17:13		17:56	19:32	20:11	2 07:02 (22)
18	07:57		07:22	07:34	06:38	06:58 (22)
	17:15		17:58	19:33	20:12	6 07:04 (22)
19	07:57		07:20	07:32	06:36	06:56 (22)
	17:16		17:59	19:34	20:13	9 07:05 (22)
20	07:56		07:19	07:30	06:34	06:55 (22)
	17:17		18:00	19:36	20:14	11 07:06 (22)
21	07:55		07:17	07:28	06:33	06:53 (22)
	17:19		18:00	19:37	20:15	13 07:06 (22)
22	07:54		07:16	07:26	06:31	06:51 (22)
	17:20		18:02	19:38	20:17	15 07:06 (22)
23	07:54		07:14	07:24	06:29	06:50 (22)
	17:21		18:03	19:39	20:18	17 07:07 (22)
24	07:53		07:12	07:22	06:28	06:48 (22)
	17:23		18:04	19:41	20:19	19 07:07 (22)
25	07:52		07:11	07:21	06:26	06:47 (22)
	17:24		18:06	19:42	20:20	20 07:07 (22)
26	07:51		07:09	07:19	06:24	06:45 (22)
	17:25		18:07	19:43	20:22	22 07:07 (22)
27	07:50		07:07	07:17	06:23	06:44 (22)
	17:27		18:08	19:44	20:23	23 07:07 (22)
28	07:49		07:06	07:15	06:21	06:42 (22)
	17:28		18:10	19:46	20:24	24 07:06 (22)
29	07:48			07:13	06:20	06:41 (22)
	17:29			19:47	20:25	25 07:06 (22)
30	07:47			07:11	06:18	06:41 (22)
	17:31			19:48	20:27	23 07:04 (22)
31	07:46			07:10		
	17:32			19:49		
Potential sun hours	287	292	369	403	458	464
Total, worst case	230			229	82	
Sun reduction	0.57			0.61	0.65	
Oper. time red.	0.98			0.98	0.98	
Wind dir. red.	0.70			0.54	0.54	
Total reduction	0.40			0.33	0.35	
Total, real	91			75	29	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H309 - H309

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09	07:02 17:15	07:41 16:47
2	05:45 21:14	06:12 20:51	06:48 20:03	07:24 19:07	07:03 17:14	13 08:36 (23) 07:42 08:22 (23) 16:47 15 08:37 (23)
3	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	07:05 17:13	07:43 08:23 (23) 16:47 16 08:39 (23)
4	05:46 21:14	06:15 20:49	06:51 19:59	07:26 19:04	07:06 17:11	07:44 08:22 (23) 16:46 18 08:40 (23)
5	05:46 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10	07:45 08:22 (23) 16:46 19 08:41 (23)
6	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	07:09 17:09	07:46 08:22 (23) 16:46 20 08:42 (23)
7	05:48 21:13	06:18 20:45	07:00 (22) 06:54 (22)	07:30 19:54	07:10 18:56	07:47 08:22 (23) 16:46 21 08:43 (23)
8	05:48 21:12	06:19 20:44	06:56 (22) 07:07 (22)	06:55 19:52	07:31 18:55	07:48 08:22 (23) 16:46 21 08:43 (23)
9	05:49 21:12	06:20 20:42	06:54 (22) 07:09 (22)	06:56 19:50	07:32 18:53	07:49 08:22 (23) 16:45 22 08:44 (23)
10	05:50 21:11	06:21 20:41	06:52 (22) 07:10 (22)	06:58 19:48	07:33 18:51	07:50 08:22 (23) 16:45 23 08:45 (23)
11	05:51 21:11	06:23 20:39	06:52 (22) 07:12 (22)	06:59 19:47	07:35 18:49	07:51 08:23 (23) 16:45 22 08:45 (23)
12	05:52 21:10	06:24 20:38	06:51 (22) 07:13 (22)	07:00 19:45	07:36 18:47	07:52 08:23 (23) 16:46 23 08:46 (23)
13	05:52 21:10	06:25 20:36	06:50 (22) 07:13 (22)	07:01 19:43	07:37 18:46	07:53 08:23 (23) 16:46 23 08:46 (23)
14	05:53 21:09	06:26 20:35	06:49 (22) 07:13 (22)	07:02 19:41	07:38 18:44	07:54 08:23 (23) 16:46 24 08:47 (23)
15	05:54 21:09	06:27 20:33	06:50 (22) 07:14 (22)	07:03 19:39	07:40 18:42	07:54 08:24 (23) 16:46 23 08:47 (23)
16	05:55 21:08	06:28 20:32	06:51 (22) 07:14 (22)	07:05 19:37	07:41 18:40	07:55 08:24 (23) 16:46 24 08:48 (23)
17	05:56 21:07	06:30 20:30	06:52 (22) 07:13 (22)	07:06 19:35	07:42 18:39	07:56 08:24 (23) 16:46 24 08:48 (23)
18	05:57 21:06	06:31 20:29	06:53 (22) 07:13 (22)	07:07 19:34	07:43 18:37	07:57 08:25 (23) 16:47 24 08:49 (23)
19	05:58 21:06	06:32 20:27	06:54 (22) 07:13 (22)	07:08 19:32	07:45 18:35	07:57 08:26 (23) 16:47 24 08:50 (23)
20	05:59 21:05	06:33 20:25	06:56 (22) 07:13 (22)	07:09 19:30	07:46 18:34	07:58 08:26 (23) 16:48 24 08:50 (23)
21	06:00 21:04	06:34 20:24	06:57 (22) 07:12 (22)	07:10 19:28	07:47 18:32	07:58 08:27 (23) 16:48 24 08:51 (23)
22	06:01 21:03	06:35 20:22	06:58 (22) 07:11 (22)	07:12 19:26	07:49 18:31	07:59 08:27 (23) 16:49 24 08:51 (23)
23	06:02 21:02	06:37 20:20	06:59 (22) 07:10 (22)	07:13 19:24	07:50 18:29	07:59 08:28 (23) 16:49 24 08:52 (23)
24	06:03 21:01	06:38 20:19	07:00 (22) 07:08 (22)	07:14 19:22	07:51 18:27	08:00 08:28 (23) 16:50 24 08:52 (23)
25	06:04 21:00	06:39 20:17	07:01 (22) 07:06 (22)	07:15 19:20	07:53 18:26	08:00 08:28 (23) 16:50 24 08:52 (23)
26	06:05 20:59	06:40 20:15	07:02 (22) 07:04 (22)	07:16 19:18	07:54 18:24	08:01 08:29 (23) 16:51 24 08:53 (23)
27	06:06 20:58	06:41 20:14	07:18 19:17	07:55 18:23	07:36 16:49	08:01 08:29 (23) 16:52 24 08:53 (23)
28	06:07 20:57	06:42 20:12	07:19 19:15	07:57 18:21	07:37 16:49	08:01 08:30 (23) 16:52 23 08:53 (23)
29	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:01 08:30 (23) 8 08:33 (23) 16:53 24 08:54 (23)
30	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	07:40 16:48	08:02 08:30 (23) 11 08:35 (23) 16:54 24 08:54 (23)
31	06:10 20:54	06:46 20:07	08:01 18:17	07:40 16:48	07:40 16:48	08:02 08:31 (23) 16:55 23 08:54 (23)
Potential sun hours	471	435	377	341	289	276
Total, worst case		314			19	685
Sun reduction		0.74			0.50	0.49
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.54			0.70	0.70
Total reduction		0.40			0.35	0.34
Total, real		124			7	234

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H310 - H310

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H311 - H311

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09	07:43 (22) 17:15	07:02 16:47
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:44 21:03	05:45 21:14	06:12 20:51	06:48 20:03	07:24 19:07	07:45 (22) 17:14	07:03 16:47
3	08:02 16:58	07:43 17:36	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:49 20:01	07:25 19:05	07:46 (22) 17:13	07:05 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	06:13 20:31	05:43 21:04	05:46 21:14	06:15 20:49	06:51 20:00	07:26 19:04	07:47 (22) 17:11	07:06 16:46
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:48 (22) 17:10	07:07 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	07:50 (22) 17:09	07:09 16:46
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:08 20:35	05:41 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:08	07:11 16:46
8	08:01 17:03	07:36 17:44	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:44	06:55 19:52	07:31 18:55	07:11 17:06	07:12 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53	07:13 17:05	07:13 16:45
10	08:01 17:05	07:34 17:46	07:48 19:23	06:51 20:02	06:05 20:39	05:41 21:08	05:50 21:11	06:21 20:41	06:58 19:49	07:33 18:51	07:14 17:04	06:58 16:45
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:40	05:40 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:15 17:03	07:51 16:45
12	08:00 17:07	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	05:40 21:10	05:52 21:10	06:24 20:38	07:00 19:45	07:36 18:47	07:17 17:02	07:52 16:46
13	08:00 17:08	07:29 17:51	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:36 20:35	07:02 19:41	07:38 18:44	07:19 17:00	07:54 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:03 19:39	07:40 18:42	07:21 16:59	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:57 20:46	05:40 21:12	05:55 21:08	06:28 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:55 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:11	05:56 20:47	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:35	07:42 18:39	07:23 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:34 19:33	06:38 20:12	05:55 20:48	05:40 21:12	05:57 21:07	06:31 20:29	07:07 19:34	07:43 18:37	07:25 16:56	07:57 16:47
19	07:57 17:16	07:20 17:59	07:32 19:35	06:36 20:13	05:54 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:35	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	05:53 20:50	05:40 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:15	05:52 20:51	05:40 21:13	06:00 21:04	06:34 20:24	07:10 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:51 20:52	05:41 21:14	06:01 21:03	06:35 20:22	07:12 19:26	07:49 18:31	07:30 16:52	07:59 16:49
23	07:54 17:21	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:20	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49
24	07:53 17:23	07:12 18:04	07:22 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:27	07:33 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:53 18:26	07:34 16:50	08:00 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:24 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:19	07:54 18:24	07:35 16:50	08:01 16:51
27	07:50 17:27	07:07 18:08	07:17 19:45	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:18 19:17	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:42 20:12	07:19 19:15	07:57 18:21	07:37 16:49	08:01 16:52
29	07:48 17:29	07:06 18:10	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:01 16:53
30	07:47 17:31	07:05 18:11	07:11 19:48	06:18 20:27	05:45 21:00	05:44 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	07:40 16:48	08:02 16:54
31	07:46 17:32	07:04 18:10	07:10 19:49	06:17 21:01	05:45 21:01	05:44 21:14	06:10 20:54	06:46 20:07	07:22 18:17	08:01 18:17	07:38 16:48	08:02 16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case			48						12	36		
Sun reduction			0.59						0.69	0.63		
Oper. time red.			0.98						0.98	0.98		
Wind dir. red.			0.62						0.62	0.62		
Total reduction			0.36						0.42	0.38		
Total, real			17						5	14		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H312 - H312

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:49	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H313 - H313

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:11 20:53	06:47 20:05	07:22 19:09		07:02 17:15
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:44 21:03	05:45 21:14	06:12 20:51	06:48 20:03	07:24 19:07	5	07:30 (22) 16:47
3	08:02 16:58	07:42 17:36	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	2	07:26 (22) 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	06:13 20:31	05:43 21:04	05:46 21:14	06:15 20:49	06:51 19:59	07:26 19:04		07:06 17:11
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:33	05:42 21:05	05:46 21:13	06:16 20:48	06:52 19:58	07:27 19:02		07:07 17:10
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00		07:09 17:09
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:08 20:35	05:41 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56		07:10 17:08
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9	08:01 17:04	07:35 17:45	07:56 (22) 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53		07:13 17:05
10	08:01 17:05	07:34 17:46	07:55 (22) 19:23	06:51 20:02	06:05 20:39	05:41 21:08	05:50 21:11	06:21 20:41	06:58 19:48	07:33 18:51		07:14 17:04
11	08:01 17:06	07:32 17:48	07:53 (22) 19:24	06:46 20:03	06:03 20:40	05:40 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49		07:15 17:03
12	08:00 17:07	07:31 17:49	07:52 (22) 19:26	06:48 20:04	06:02 20:41	05:40 21:10	05:51 21:10	06:24 20:38	07:00 19:45	07:36 18:47		07:17 17:02
13	08:00 17:08	07:29 17:51	08:01 (22) 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46		07:18 17:01
14	07:59 17:10	07:28 17:52	08:02 (22) 19:27	06:44 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44		07:19 17:00
15	07:59 17:11	07:26 17:53	07:48 (22) 19:29	06:39 20:08	06:43 20:44	05:59 21:11	05:54 21:09	06:27 20:33	07:03 19:39	07:40 18:42		07:21 16:58
16	07:58 17:12	07:25 17:55	07:46 (22) 19:31	06:37 20:09	06:41 20:46	05:57 21:12	05:55 21:08	06:28 20:32	07:05 19:37	07:41 18:41		07:22 16:58
17	07:58 17:13	07:23 17:56	07:44 (22) 19:32	06:35 20:11	06:39 20:47	05:56 21:12	05:56 21:07	06:30 20:30	07:06 19:35	07:42 18:39		07:23 16:57
18	07:57 17:15	07:22 17:58	07:45 (22) 19:33	06:38 20:12	05:55 20:48	05:40 21:12	05:57 21:07	06:31 20:29	07:07 19:34	07:43 18:37		07:25 16:56
19	07:57 17:16	07:20 17:59	07:47 (22) 19:34	06:36 20:13	05:54 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:35		07:26 16:55
20	07:56 17:17	07:19 18:00	07:56 (22) 19:35	06:34 20:14	05:53 20:50	05:40 21:13	05:59 21:05	06:33 20:25	07:09 19:30	07:46 18:34		07:27 16:54
21	07:55 17:19	07:17 18:00	07:57 (22) 19:36	06:33 20:15	05:52 20:51	05:40 21:13	06:00 21:04	06:34 20:24	07:10 19:28	07:47 18:32		07:29 16:53
22	07:54 17:20	07:16 18:02	07:26 (22) 19:38	06:31 20:17	05:51 20:52	05:41 21:14	06:01 21:03	06:35 20:22	07:12 19:26	07:49 18:31		07:30 16:52
23	07:54 17:21	07:14 18:03	07:24 (22) 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:20	07:13 19:24	07:50 18:29	5	08:25 (22) 16:52
24	07:53 17:23	07:12 18:04	07:22 (22) 19:41	06:28 20:19	05:50 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:27	10	08:14 (22) 16:52
25	07:52 17:24	07:11 18:06	07:21 (22) 19:42	06:26 20:20	05:49 20:55	05:41 21:14	06:04 21:00	06:39 20:17	07:15 19:20	07:53 18:26	14	08:15 (22) 16:50
26	07:51 17:25	07:09 18:07	07:19 (22) 19:43	06:24 20:22	05:48 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:54 18:24	15	08:16 (22) 16:50
27	07:50 17:27	07:07 18:08	07:17 (22) 19:44	06:23 20:23	05:47 20:57	05:42 21:14	06:06 20:58	06:41 20:14	07:18 19:17	07:55 18:23	14	08:30 (22) 16:50
28	07:49 17:28	07:06 18:10	07:16 (22) 19:45	06:21 20:24	05:47 20:58	05:43 21:14	06:07 20:57	06:42 20:12	07:19 19:15	07:57 18:21	13	08:31 (22) 16:49
29	07:48 17:29	07:06 18:12	07:15 (22) 19:46	06:20 20:25	05:46 20:59	05:44 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	12	08:20 (22) 16:48
30	07:47 17:31	07:05 18:13	07:14 (22) 19:47	06:18 20:27	05:45 21:00	05:43 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	10	08:22 (22) 16:48
31	07:46 17:32	07:04 18:14	07:13 (22) 19:48	06:17 20:28	05:44 21:01	05:42 20:54	06:06 20:54	06:41 20:07	07:18 18:17	07:55 18:23	9	08:31 (22) 16:48
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case		111								109	7	
Sun reduction		0.59								0.63	0.50	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.65								0.65	0.65	
Total reduction		0.38								0.40	0.32	
Total, real		42								44	2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H314 - H314

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H315 - H315

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:09		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H316 - H316

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:13	05:42	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:02	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:15	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H317 - H317

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	07:45	07:04	07:08	06:17	05:44	06:07 (12)	05:44	06:08 (12)	06:11	06:47	07:41	
	16:56	17:34	18:11	19:51	20:28	21:02	06:16 (12)	21:14	11	06:19 (12)	20:53	20:05	
2	08:02	07:44	07:02	07:06	06:15	05:43	06:07 (12)	05:44	06:09 (12)	06:12	06:48	07:42	
	16:57	17:35	18:12	19:52	20:29	21:03	06:16 (12)	21:14	11	06:20 (12)	20:51	20:03	
3	08:02	07:42	07:00	07:04	06:14	05:43	06:06 (12)	05:45	06:09 (12)	06:13	06:49	07:43	
	16:57	17:36	18:14	19:53	20:30	21:03	06:16 (12)	21:14	11	06:20 (12)	20:50	20:01	
4	08:02	07:41	06:59	07:02	06:12	05:42	06:06 (12)	05:46	06:10 (12)	06:15	06:51	07:44	
	16:58	17:38	18:15	19:54	20:31	21:04	06:16 (12)	21:14	11	06:21 (12)	20:49	20:01	
5	08:02	07:40	06:57	07:00	06:11	05:42	06:06 (12)	05:46	06:11 (12)	06:16	06:52	07:45	
	16:59	17:39	18:16	19:56	20:33	21:05	06:16 (12)	21:13	11	06:22 (12)	20:48	20:01	
6	08:02	07:39	06:55	06:58	06:10	05:42	06:05 (12)	05:47	06:11 (12)	06:17	06:53	07:46	
	17:00	17:41	18:18	19:57	20:34	21:06	06:16 (12)	21:13	11	06:22 (12)	20:46	20:01	
7	08:02	07:38	06:53	06:57	06:08	05:41	06:05 (12)	05:48	06:12 (12)	06:18	06:54	07:47	
	17:02	17:42	18:19	19:58	20:35	21:06	06:16 (12)	21:13	10	06:22 (12)	20:45	20:01	
8	08:01	07:36	07:52	06:55	06:07	05:41	06:05 (12)	05:48	06:13 (12)	06:19	06:55	07:48	
	17:03	17:43	18:20	19:59	20:36	21:07	06:16 (12)	21:12	10	06:23 (12)	20:44	20:01	
9	08:01	07:35	07:50	06:53	06:06	05:41	06:04 (12)	05:49	06:13 (12)	06:20	06:56	07:49	
	17:04	17:45	19:22	20:01	20:37	21:08	06:15 (12)	21:12	10	06:23 (12)	20:42	20:01	
10	08:01	07:34	07:48	06:51	06:04	05:40	06:04 (12)	05:50	06:14 (12)	06:21	06:57	07:50	
	17:05	17:46	19:23	20:02	20:39	21:08	06:15 (12)	21:11	9	06:23 (12)	20:41	20:01	
11	08:01	07:32	07:46	06:50	06:03	05:40	06:04 (12)	05:51	06:15 (12)	06:23	06:59	07:51	
	17:06	17:48	19:24	20:03	20:40	21:09	06:15 (12)	21:11	9	06:24 (12)	20:39	20:01	
12	08:00	07:31	07:44	06:48	06:02	05:40	06:04 (12)	05:51	06:16 (12)	06:24	07:00	07:52	
	17:07	17:49	19:25	20:04	20:41	21:10	06:15 (12)	21:10	8	06:24 (12)	20:38	20:01	
13	08:00	07:29	07:43	06:46	06:01	05:40	06:04 (12)	05:52	06:16 (12)	06:25	07:01	07:53	
	17:08	17:50	19:27	20:06	20:42	21:10	06:15 (12)	21:10	8	06:24 (12)	20:36	20:01	
14	07:59	07:28	07:41	06:44	06:00	05:40	06:04 (12)	05:53	06:17 (12)	06:26	07:02	07:54	
	17:10	17:52	19:28	20:07	20:43	21:11	06:15 (12)	21:09	7	06:24 (12)	20:35	20:01	
15	07:59	07:26	07:39	06:43	05:58	05:40	06:05 (12)	05:54	06:18 (12)	06:27	07:03	07:54	
	17:11	17:53	19:29	20:08	20:44	21:11	06:15 (12)	21:09	6	06:24 (12)	20:33	20:01	
16	07:58	07:25	07:37	06:41	05:57	05:40	06:05 (12)	05:55	06:19 (12)	06:28	07:04	07:55	
	17:12	17:55	19:31	20:09	20:45	21:12	06:15 (12)	21:08	5	06:24 (12)	20:32	20:01	
17	07:58	07:23	07:35	06:39	05:56	05:40	06:06 (12)	05:56	06:20 (12)	06:29	07:06	07:56	
	17:13	17:56	19:32	20:10	20:47	21:12	06:15 (12)	21:07	5	06:25 (12)	20:30	20:01	
18	07:57	07:22	07:33	07:54 (16)	06:37	05:55	06:06 (12)	05:57	06:21 (12)	06:31	07:07	07:57	
	17:15	17:57	19:33	2	07:56 (16)	20:12	20:48	21:12	9	06:15 (12)	21:06	20:01	
19	07:56	07:20	07:32	07:52 (16)	06:36	05:54	06:06 (12)	05:58	06:22 (12)	06:32	07:08	07:57	
	17:16	17:59	19:34	5	07:57 (16)	20:13	20:49	21:13	9	06:15 (12)	21:06	20:01	
20	07:56	07:19	07:30	07:50 (16)	06:34	05:53	06:06 (12)	05:59	06:22 (12)	06:33	07:09	07:58	
	17:17	18:00	19:36	8	07:58 (16)	20:14	20:50	21:13	9	06:15 (12)	21:05	20:01	
21	07:55	07:17	07:28	07:48 (16)	06:32	05:52	06:07 (12)	06:00	06:23 (12)	06:34	07:10	07:58	
	17:18	18:00	19:37	10	07:58 (16)	20:15	20:51	21:13	9	06:16 (12)	21:04	20:01	
22	07:54	07:16	07:26	07:46 (16)	06:31	05:51	06:07 (12)	06:01	06:35	07:12	07:33 (16)	07:59	
	17:20	18:02	19:38	13	07:59 (16)	20:17	20:52	21:14	9	06:16 (12)	21:03	20:01	
23	07:54	07:14	07:24	07:44 (16)	06:29	05:50	06:07 (12)	06:02	06:36	07:13	07:34 (16)	07:59	
	17:21	18:03	19:39	14	07:58 (16)	20:18	20:53	21:14	9	06:16 (12)	21:02	20:01	
24	07:53	07:12	07:22	07:43 (16)	06:28	05:50	06:07 (12)	06:03	06:38	07:14	07:35 (16)	07:58	
	17:22	18:04	19:41	16	07:59 (16)	20:19	20:54	2	06:14 (12)	21:14	9	06:16 (12)	21:01
25	07:52	07:11	07:21	07:41 (16)	06:26	05:49	06:08 (12)	06:04	06:39	07:15	07:36 (16)	07:57	
	17:24	18:06	19:42	17	07:58 (16)	20:20	20:55	3	06:15 (12)	21:14	9	06:17 (12)	21:00
26	07:51	07:09	07:19	07:39 (16)	06:24	05:48	06:11 (12)	05:42	06:40	07:16	07:37	07:58	
	17:25	18:07	19:43	18	07:57 (16)	20:22	20:56	4	06:15 (12)	21:14	10	06:17 (12)	20:59
27	07:50	07:07	07:17	07:38 (16)	06:23	05:47	06:10 (12)	05:42	06:41	07:17	07:38	07:59	
	17:27	18:08	19:44	18	07:56 (16)	20:23	20:57	5	06:15 (12)	21:14	10	06:17 (12)	20:58
28	07:49	07:06	07:15	07:39 (16)	06:21	05:46	06:09 (12)	05:42	06:42	07:19	07:39	07:59	
	17:28	18:10	19:46	15	07:54 (16)	20:24	20:58	6	06:15 (12)	21:14	10	06:18 (12)	20:57
29	07:48		07:13	07:40 (16)	06:20	05:46	06:09 (12)	05:43	06:44	07:20	07:41	07:59	
	17:29		19:47	12	07:52 (16)	20:25	20:59	7	06:16 (12)	21:14	11	06:18 (12)	20:56
30	07:47		07:11	07:43 (16)	06:18	05:45	06:08 (12)	05:43	06:45	07:21	07:42	07:59	
	17:31		19:48	5	07:48 (16)	20:26	21:00	7	06:15 (12)	21:14	11	06:19 (12)	20:55
31	07:46		07:09		05:45	05:45	06:08 (12)	05:45	06:46	07:22	07:43	07:59	
	17:32		19:49		21:01	8	06:16 (12)	20:54	20:07	20:07	20:07	20:07	
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276	
Total, worst case			153		42	300	160	155					
Sun reduction			0.59		0.65	0.70	0.76	0.69					
Oper. time red.			0.98		0.98	0.98	0.98	0.98					
Wind dir. red.			0.60		0.56	0.56	0.56	0.60					
Total reduction			0.35		0.36	0.38	0.42	0.41					
Total, real			53		15	115	67	63					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H318 - H318

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December						
1	08:02	07:45	07:04	07:08	06:17	05:44	06:12 (16)	05:44	06:15 (16)	06:11	06:47	07:22	07:02	07:41				
	16:56	17:34	18:11	19:51	20:28	21:02	47	06:59 (16)	21:14	53	07:08 (16)	20:53	20:05	19:09	17:15	16:47		
2	08:02	07:44	07:02	07:06	06:15	05:43	06:12 (16)	05:44	06:16 (16)	06:12	06:48	07:23	07:03	07:42				
	16:57	17:35	18:12	19:52	20:29	21:02	48	07:00 (16)	21:14	52	07:08 (16)	20:51	20:03	19:07	17:14	16:47		
3	08:02	07:42	07:00	07:04	06:14	05:43	06:11 (16)	05:45	06:16 (16)	06:13	06:49	07:25	07:05	07:43				
	16:57	17:36	18:14	19:53	20:30	21:03	49	07:00 (16)	21:14	52	07:08 (16)	20:50	20:01	19:05	17:13	16:46		
4	08:02	07:41	06:59	07:02	06:12	05:42	06:12 (16)	05:46	06:17 (16)	06:14	06:50	07:26	07:06	07:44				
	16:58	17:38	18:15	19:54	20:31	21:04	49	07:01 (16)	21:13	51	07:08 (16)	20:49	19:59	19:04	17:11	16:46		
5	08:02	07:40	06:57	07:00	06:11	05:42	06:12 (16)	05:46	06:18 (16)	06:16	06:52	07:27	07:07	07:45				
	16:59	17:39	18:16	19:56	20:33	21:05	50	07:02 (16)	21:13	50	07:08 (16)	20:48	19:58	19:02	17:10	16:46		
6	08:02	07:39	06:55	06:58	06:10	05:42	06:11 (16)	05:47	06:17 (16)	06:17	06:53	07:28	07:09	07:46				
	17:00	17:41	18:18	19:57	20:34	21:06	50	07:01 (16)	21:13	51	07:08 (16)	20:46	19:56	19:00	17:09	16:46		
7	08:02	07:37	06:53	06:57	06:08	05:41	06:11 (16)	05:48	06:18 (16)	06:18	06:54	07:30	07:10	07:47				
	17:01	17:42	18:19	19:58	20:35	21:06	51	07:02 (16)	21:13	50	07:08 (16)	20:45	19:54	18:56	17:07	16:45		
8	08:01	07:36	07:52	06:55	06:07	05:41	06:12 (16)	05:48	06:19 (16)	06:19	06:55	07:31	07:11	07:48				
	17:03	17:43	18:20	19:59	20:36	21:07	51	07:03 (16)	21:12	49	07:08 (16)	20:43	19:52	18:54	17:06	16:45		
9	08:01	07:35	07:50	06:53	06:06	05:41	06:11 (16)	05:49	06:18 (16)	06:20	06:56	07:32	07:13	07:49				
	17:04	17:45	19:22	20:01	20:37	21:08	51	07:02 (16)	21:12	49	07:07 (16)	20:42	19:50	18:53	17:05	16:45		
10	08:01	07:33	07:48	06:51	06:04	05:40	06:11 (16)	05:50	06:19 (16)	06:21	06:57	07:33	07:14	07:50				
	17:05	17:46	19:23	20:02	20:38	21:08	52	07:03 (16)	21:11	49	07:08 (16)	20:41	19:48	18:51	17:04	16:45		
11	08:01	07:32	07:46	06:50	06:03	05:40	06:11 (16)	05:51	06:20 (16)	06:22	06:59	07:34	07:15	07:51				
	17:06	17:48	19:24	20:03	20:40	21:09	52	07:03 (16)	21:11	48	07:08 (16)	20:39	19:47	18:49	17:03	16:45		
12	08:00	07:31	07:44	06:48	06:02	05:40	06:12 (16)	05:51	06:21 (16)	06:24	07:00	07:36	07:17	07:52				
	17:07	17:49	19:25	20:04	20:41	21:10	52	07:04 (16)	21:10	47	07:08 (16)	20:38	19:45	18:47	17:02	16:45		
13	08:00	07:29	07:43	06:46	06:01	05:40	06:12 (16)	05:52	06:21 (16)	06:25	07:01	07:37	07:18	07:53				
	17:08	17:50	19:27	20:05	20:42	21:10	52	07:04 (16)	21:10	45	07:06 (16)	20:36	19:43	18:46	17:00	16:45		
14	07:59	07:28	07:41	06:44	06:00	05:40	06:12 (16)	05:53	06:21 (16)	06:26	07:02	07:38	07:19	07:54				
	17:09	17:52	19:28	20:07	20:43	21:11	53	07:05 (16)	21:09	45	07:06 (16)	20:35	19:41	18:44	16:59	16:46		
15	07:59	07:26	07:39	06:43	05:58	05:40	06:12 (16)	05:54	06:22 (16)	06:27	07:03	07:40	07:21	07:54				
	17:11	17:53	19:29	20:08	20:44	21:11	53	07:05 (16)	21:09	44	07:06 (16)	20:33	19:39	18:42	16:58	16:46		
16	07:58	07:25	07:37	06:41	05:57	05:40	06:12 (16)	05:55	06:23 (16)	06:28	07:04	07:41	07:22	07:55				
	17:12	17:55	19:31	20:09	20:45	6	06:37 (16)	21:12	53	07:05 (16)	21:08	43	07:06 (16)	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	06:12 (16)	05:56	06:24 (16)	06:29	07:06	07:42	07:23	07:56				
	17:13	17:56	19:32	20:10	20:47	16	06:42 (16)	21:12	53	07:05 (16)	21:07	41	07:05 (16)	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	06:12 (16)	05:57	06:25 (16)	06:31	07:07	07:43	07:25	07:57				
	17:15	17:57	19:33	20:12	20:48	22	06:45 (16)	21:12	53	07:05 (16)	21:06	40	07:05 (16)	20:29	19:33	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	06:12 (16)	05:58	06:26 (16)	06:32	07:08	07:45	07:26	07:57				
	17:16	17:59	19:34	20:13	20:49	26	06:47 (16)	21:13	54	07:06 (16)	21:06	38	07:04 (16)	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	06:12 (16)	05:59	06:26 (16)	06:33	07:09	07:46	07:27	07:58				
	17:17	18:00	19:36	20:14	20:50	28	06:49 (16)	21:13	54	07:06 (16)	21:05	37	07:03 (16)	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	06:12 (16)	06:00	06:27 (16)	06:34	07:10	07:47	07:29	07:58				
	17:18	18:00	19:37	20:15	20:51	32	06:51 (16)	21:13	54	07:06 (16)	21:04	35	07:02 (16)	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:13 (16)	06:01	06:28 (16)	06:35	07:11	07:49	07:30	07:59				
	17:20	18:02	19:38	20:17	20:52	34	06:52 (16)	21:14	54	07:07 (16)	21:03	33	07:01 (16)	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:13 (16)	06:02	06:29 (16)	06:36	07:13	07:50	07:31	07:59				
	17:21	18:03	19:39	20:18	20:53	36	06:53 (16)	21:14	54	07:07 (16)	21:02	30	06:59 (16)	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:28	05:50	05:41	06:13 (16)	06:03	06:31 (16)	06:38	07:14	07:51	07:32	08:00				
	17:22	18:04	19:41	20:19	20:54	37	06:53 (16)	21:14	54	07:07 (16)	21:01	27	06:58 (16)	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:14 (16)	06:04	06:33 (16)	06:39	07:15	07:52	07:34	08:00				
	17:24	18:06	19:42	20:20	20:55	39	06:54 (16)	21:14	53	07:07 (16)	21:00	23	06:56 (16)	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:15 (16)	05:42	06:35 (16)	06:40	07:16	07:54	07:35	08:01				
	17:25	18:07	19:43	20:22	20:56	41	06:56 (16)	21:14	53	07:07 (16)	20:59	19	06:54 (16)	20:15	19:18	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:14 (16)	06:06	06:38 (16)	06:41	07:17	07:55	07:36	08:01				
	17:27	18:08	19:44	20:23	20:57	42	06:56 (16)	21:14	53	07:07 (16)	20:58	13	06:51 (16)	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:15 (16)	05:42	06:15 (16)	06:07	06:42	07:19	07:56	07:37	08:01			
	17:28	18:10	19:46	20:24	20:58	43	06:56 (16)	21:14	53	07:08 (16)	20:57	20:12	19:15	18:21	16:48	16:52		
29	07:48		07:13	06:20	05:46	05:43	06:15 (16)	05:43	06:15 (16)	06:08	06:43	07:20	07:58	07:39	08:01			
	17:29		19:47	20:25	20:59	45	06:58 (16)	21:14	52	07:07 (16)	20:56	20:10	19:13	18:20	16:48	16:53		
30	07:47		07:11	06:18	05:45	05:43	06:16 (16)	05:43	06:16 (16)	06:09	06:45	07:21	07:59	07:40	08:02			
	17:31		19:48	20:26	21:00	46	06:58 (16)	21:14	52	07:08 (16)	20:55	20:08	19:11	18:18	16:47	16:54		
31	07:46		07:09		05:44	05:44	06:13 (16)		06:10	06:46		08:00		08:02				
	17:32		19:49		21:01	46	06:59 (16)		20:54	20:07		18:17		16:54				
Potential sun hours	287	292	369	403	458	464		471	435	377	341	289	276					
Total, worst case					539	1559		1114										
Sun reduction					0.65	0.70		0.76										
Oper. time red.					0.98	0.98		0.98										
Wind dir. red.					0.56	0.56		0.56										
Total reduction					0.36	0.38		0.42										
Total, real					191	596		463										

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H319 - H319

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:33	07:04 18:11	07:33 (19) 08:23 (19)	07:08 19:51	06:17 20:28
2	08:02 16:56	07:43 17:35	07:02 18:12	07:33 (19) 08:24 (19)	07:06 19:52	06:15 20:29
3	08:02 16:57	07:42 17:36	07:00 18:14	07:32 (19) 08:24 (19)	07:04 19:53	06:14 20:30
4	08:02 16:58	07:41 17:38	06:59 18:15	07:32 (19) 08:23 (19)	07:02 19:54	06:12 20:31
5	08:02 16:59	07:40 17:39	06:57 18:16	07:31 (19) 08:23 (19)	07:00 19:56	06:11 20:32
6	08:02 17:00	07:39 17:41	06:55 18:18	07:32 (19) 08:23 (19)	06:58 19:57	06:10 20:34
7	08:02 17:01	07:37 17:42	06:53 18:19	07:31 (19) 08:23 (19)	06:57 19:58	06:08 20:35
8	08:01 17:02	07:36 17:43	07:52 18:20	08:31 (19) 09:22 (19)	06:55 19:59	06:07 20:36
9	08:01 17:04	07:35 17:45	07:50 19:21	08:31 (19) 09:21 (19)	06:53 20:00	06:06 20:37
10	08:01 17:05	07:33 17:46	07:48 19:23	08:31 (19) 09:21 (19)	06:51 20:02	06:04 20:38
11	08:00 17:06	07:32 17:48	07:46 19:24	08:32 (19) 09:21 (19)	06:49 20:03	06:03 20:40
12	08:00 17:07	07:31 17:49	07:44 19:25	08:32 (19) 09:19 (19)	06:48 20:04	06:02 20:41
13	08:00 17:08	07:29 17:50	07:43 19:27	08:32 (19) 09:18 (19)	06:46 20:05	06:01 20:42
14	07:59 17:09	07:28 17:52	07:41 19:28	08:33 (19) 09:17 (19)	06:44 20:07	06:00 20:43
15	07:59 17:11	07:26 17:53	07:39 19:29	08:33 (19) 09:15 (19)	06:42 20:08	05:58 20:44
16	07:58 17:12	07:25 17:55	07:37 19:31	08:34 (19) 09:14 (19)	06:41 20:09	05:57 20:45
17	07:58 17:13	07:23 17:56	07:35 19:32	08:35 (19) 09:12 (19)	06:39 20:10	05:56 20:46
18	07:57 17:14	07:22 17:57	07:49 (19) 08:11 (19)	07:33 19:33	06:37 20:12	05:55 20:48
19	07:56 17:16	07:20 17:59	07:46 (19) 08:13 (19)	07:32 19:34	06:36 20:13	05:54 20:49
20	07:56 17:17	07:19 18:00	07:44 (19) 08:16 (19)	07:30 19:36	06:34 20:14	05:53 20:50
21	07:55 17:18	07:17 18:00	07:42 (19) 08:17 (19)	07:28 19:37	06:32 20:15	05:52 20:51
22	07:54 17:20	07:15 18:01	07:40 (19) 08:18 (19)	07:26 19:38	06:31 20:17	05:51 20:52
23	07:53 17:21	07:14 18:03	07:39 (19) 08:20 (19)	07:24 19:39	06:29 20:18	05:50 20:53
24	07:53 17:22	07:12 18:04	07:38 (19) 08:21 (19)	07:22 19:41	06:27 20:19	05:49 20:54
25	07:52 17:24	07:11 18:06	07:36 (19) 08:21 (19)	07:20 19:42	06:26 20:20	05:49 20:55
26	07:51 17:25	07:09 18:07	07:36 (19) 08:22 (19)	07:19 19:43	06:24 20:21	05:48 20:56
27	07:50 17:26	07:07 18:08	07:35 (19) 08:23 (19)	07:17 19:44	06:23 20:23	05:47 20:57
28	07:49 17:28	07:06 18:10	07:34 (19) 08:23 (19)	07:15 19:46	06:21 20:24	05:46 20:58
29	07:48 17:29		07:13 19:47	07:13 19:47	06:20 20:25	05:46 20:59
30	07:47 17:31		07:11 19:48	07:11 19:48	06:18 20:26	05:45 21:00
31	07:46 17:32		07:09 19:49	07:09 19:49	05:44 21:01	20:05 (16) 20:21 (16)
Potential sun hours	287	292	369	403	458	464
Total, worst case		441	918		543	54
Sun reduction		0.59	0.59		0.65	0.70
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.63	0.63		0.64	0.65
Total reduction		0.37	0.37		0.41	0.45
Total, real		161	336		220	24

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H319 - H319

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:11	06:34 (18)	06:47	07:22	08:11 (19)	07:02	07:41	
	21:14	20:52	25 20:26 (16)	20:05	19:09	47 08:58 (19)	17:15	16:47	
2	05:44	06:12	06:36 (18)	06:48	07:23	08:10 (19)	07:03	07:42	
	21:14	20:51	22 20:26 (16)	20:03	19:07	48 08:58 (19)	17:14	16:47	
3	05:45	06:13	06:37 (18)	06:49	07:25	08:10 (19)	07:04	07:43	
	21:14	20:50	18 20:24 (16)	20:01	19:05	49 08:59 (19)	17:13	16:46	
4	05:46	06:14	06:38 (18)	06:50	07:26	08:09 (19)	07:06	07:44	
	21:13	20:49	14 20:23 (16)	19:59	19:03	50 08:59 (19)	17:11	16:46	
5	05:46	06:16	06:39 (18)	06:52	07:27	08:08 (19)	07:07	07:45	
	21:13	20:47	10 20:22 (16)	19:58	19:02	51 08:59 (19)	17:10	16:46	
6	05:47	06:17	06:40 (18)	06:53	07:28	08:07 (19)	07:09	07:46	
	21:13	20:46	4 06:44 (18)	19:56	19:00	52 08:59 (19)	17:09	16:46	
7	05:47	20:19 (16)	06:18	06:41 (18)	06:54	07:29	08:08 (19)	07:10	07:47
	21:13	3 20:22 (16)	20:45	3 06:44 (18)	19:54	18:56	51 08:59 (19)	17:07	16:45
8	05:48	20:16 (16)	06:19	06:42 (18)	06:55	07:31	08:07 (19)	07:11	07:48
	21:12	7 20:23 (16)	20:43	1 06:43 (18)	19:52	18:54	52 08:59 (19)	17:06	16:45
9	05:49	20:15 (16)	06:20	06:56	07:32	08:07 (19)	07:13	07:49	
	21:12	10 20:25 (16)	20:42	19:50	18:53	51 08:58 (19)	17:05	16:45	
10	05:50	20:14 (16)	06:21	06:57	07:33	08:06 (19)	07:14	07:50	
	21:11	13 20:27 (16)	20:41	19:48	18:51	52 08:58 (19)	17:04	16:45	
11	05:50	20:14 (16)	06:22	06:59	07:34	08:07 (19)	07:15	07:51	
	21:11	14 20:28 (16)	20:39	19:46	18:49	51 08:58 (19)	17:03	16:45	
12	05:51	20:13 (16)	06:24	07:00	07:36	08:07 (19)	07:17	07:52	
	21:10	15 20:28 (16)	20:38	19:45	18:47	50 08:57 (19)	17:01	16:45	
13	05:52	20:12 (16)	06:25	07:01	07:37	08:07 (19)	07:18	07:53	
	21:10	17 20:29 (16)	20:36	19:43	18:45	49 08:56 (19)	17:00	16:45	
14	05:53	20:12 (16)	06:26	07:02	07:38	08:07 (19)	07:19	07:54	
	21:09	18 20:30 (16)	20:35	19:41	18:44	49 08:56 (19)	16:59	16:46	
15	05:54	20:12 (16)	06:27	07:03	07:39	08:08 (19)	07:21	07:54	
	21:08	19 20:31 (16)	20:33	19:39	18:42	47 08:55 (19)	16:58	16:46	
16	05:55	20:11 (16)	06:28	07:04	07:41	08:08 (19)	07:22	07:55	
	21:08	20 20:31 (16)	20:32	19:37	18:40	46 08:54 (19)	16:57	16:46	
17	05:56	20:11 (16)	06:29	07:06	07:42	08:09 (19)	07:23	07:56	
	21:07	21 20:32 (16)	20:30	19:35	18:39	44 08:53 (19)	16:56	16:46	
18	05:57	20:11 (16)	06:31	07:07	07:43	08:10 (19)	07:25	07:56	
	21:06	22 20:33 (16)	20:28	19:33	18:37	42 08:52 (19)	16:55	16:47	
19	05:58	20:10 (16)	06:32	07:08	07:45	08:10 (19)	07:26	07:57	
	21:06	22 20:32 (16)	20:27	19:31	18:35	40 08:50 (19)	16:55	16:47	
20	05:58	20:10 (16)	06:33	07:09	07:46	08:12 (19)	07:27	07:58	
	21:05	23 20:33 (16)	20:25	19:30	18:34	37 08:49 (19)	16:54	16:47	
21	05:59	20:09 (16)	06:34	07:10	07:47	08:13 (19)	07:29	07:58	
	21:04	24 20:33 (16)	20:24	19:28	18:32	34 08:47 (19)	16:53	16:48	
22	06:00	20:09 (16)	06:35	07:11	07:48	08:14 (19)	07:30	07:59	
	21:03	24 20:33 (16)	20:22	19:26	14 08:44 (19)	18:30	31 08:45 (19)	16:52	16:48
23	06:01	20:09 (16)	06:36	07:13	08:26 (19)	07:50	08:17 (19)	07:31	07:59
	21:02	25 20:34 (16)	20:20	19:24	22 08:48 (19)	18:29	26 08:43 (19)	16:51	16:49
24	06:02	20:09 (16)	06:38	07:14	08:23 (19)	07:51	08:19 (19)	07:32	08:00
	21:01	25 20:34 (16)	20:19	19:22	28 08:51 (19)	18:27	21 08:40 (19)	16:51	16:49
25	06:04	20:09 (16)	06:39	07:15	08:20 (19)	07:52	08:24 (19)	07:34	08:00
	21:00	24 20:33 (16)	20:17	19:20	32 08:52 (19)	18:26	12 08:36 (19)	16:50	16:50
26	06:05	20:09 (16)	06:40	07:16	08:18 (19)	07:54	07:35	08:00	
	20:59	23 20:32 (16)	20:15	19:18	36 08:54 (19)	18:24	16:49	16:51	
27	06:06	06:34 (18)	06:41	07:17	08:16 (19)	07:55	07:36	08:01	
	20:58	26 20:31 (16)	20:13	19:16	39 08:55 (19)	18:23	16:49	16:51	
28	06:07	06:32 (18)	06:42	07:19	08:15 (19)	07:56	07:37	08:01	
	20:57	28 20:30 (16)	20:12	19:15	41 08:56 (19)	18:21	16:48	16:52	
29	06:08	06:31 (18)	06:43	07:20	08:14 (19)	07:58	07:38	08:01	
	20:56	30 20:29 (16)	20:10	19:13	43 08:57 (19)	18:20	16:48	16:53	
30	06:09	06:32 (18)	06:45	07:21	08:12 (19)	07:59	07:40	08:01	
	20:55	29 20:28 (16)	20:08	19:11	45 08:57 (19)	18:18	16:47	16:54	
31	06:10	06:33 (18)	06:46	07:22	08:00	08:00	08:02	08:02	
	20:54	26 20:27 (16)	20:06	19:10	18:17	341	289	16:54	
Potential sun hours	471	435	377	341	289	276			
Total, worst case	508	97	300	1082					
Sun reduction	0.76	0.74	0.69	0.63					
Oper. time red.	0.98	0.98	0.98	0.98					
Wind dir. red.	0.65	0.60	0.63	0.63					
Total reduction	0.48	0.44	0.43	0.39					
Total, real	244	42	128	423					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H320 - H320

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:32	21:05	21:13	20:47	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:37	06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:47
19	07:56	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:01
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H321 - H321

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:02 16:56	07:45 17:33	16:15 (19) 18:11	07:04 19:50	06:17 20:28	05:44 21:02	
2	08:02 16:56	16:21 (19) 17:35	36 16:51 (19) 18:12	07:02 19:52	06:15 20:29	05:43 21:02	
3	08:02 16:57	16:19 (19) 17:42	35 16:51 (19) 18:14	16:17 (19) 18:14	07:00 19:53	06:14 20:30	05:43 21:03
4	08:02 16:58	16:18 (19) 17:41	34 16:51 (19) 18:15	16:18 (19) 18:15	06:59 19:54	06:12 20:31	05:42 21:04
5	08:02 16:59	16:30 (19) 17:38	32 16:50 (19) 18:16	4 07:23 (20) 19:55	19:54 20:32	20:31 21:05	
6	08:02 17:00	16:18 (19) 17:40	30 16:19 (19) 18:16	7 07:17 (20) 19:55	07:00 20:32	06:11 21:05	
7	08:02 17:00	16:31 (19) 17:39	30 16:49 (19) 18:16	7 07:24 (20) 19:55	19:55 20:32	20:32 21:05	
8	08:02 17:00	16:17 (19) 17:39	28 16:20 (19) 18:18	9 07:16 (20) 19:57	06:58 20:34	06:10 21:06	
9	08:01 17:01	16:33 (19) 17:42	28 16:48 (19) 18:18	9 07:25 (20) 19:57	19:57 20:35	20:34 21:06	
10	08:01 17:04	16:16 (19) 17:36	26 16:22 (19) 18:19	11 07:14 (20) 19:58	06:57 20:35	06:08 21:06	
11	08:01 17:04	16:33 (19) 17:42	26 16:48 (19) 18:19	11 07:25 (20) 19:58	19:58 20:35	20:35 21:06	
12	08:01 17:04	16:16 (19) 17:36	22 16:24 (19) 18:20	13 08:12 (20) 19:59	06:55 20:36	06:07 21:07	
13	08:01 17:04	16:34 (19) 17:43	22 16:46 (19) 18:20	13 08:25 (20) 20:00	19:59 20:36	20:36 21:07	
14	08:01 17:04	16:16 (19) 17:35	19 16:25 (19) 19:21	15 08:10 (20) 20:00	06:53 20:37	06:06 21:08	
15	08:01 17:04	16:36 (19) 17:45	19 16:44 (19) 19:21	15 08:25 (20) 20:00	20:37 21:08	21:08 21:08	
16	08:00 17:05	16:15 (19) 17:33	13 16:29 (19) 19:23	16 08:08 (20) 20:02	06:51 20:38	06:04 21:08	
17	08:00 17:06	16:36 (19) 17:46	13 16:42 (19) 19:23	16 08:24 (20) 20:02	20:38 21:08	21:08 21:08	
18	08:00 17:06	16:15 (19) 17:32	07:46 19:24	17 08:06 (20) 20:03	06:49 20:40	06:03 21:09	
19	08:00 17:07	16:38 (19) 17:48	17 19:24 20:03	17 08:23 (20) 20:03	20:40 21:09	21:09 21:09	
20	08:00 17:07	16:15 (19) 17:31	07:44 19:25	17 08:06 (20) 20:04	06:48 20:41	06:02 21:09	
21	08:00 17:07	16:40 (19) 17:49	17 19:25 20:04	17 08:23 (20) 20:04	20:41 21:09	21:09 21:09	
22	08:00 17:08	16:14 (19) 17:29	07:42 19:27	14 08:07 (20) 20:05	06:46 20:42	06:01 21:10	
23	08:00 17:08	16:40 (19) 17:50	14 19:27 20:05	14 08:21 (20) 20:05	20:42 21:10	21:10 21:10	
24	07:59 17:09	16:14 (19) 17:28	07:41 19:28	11 08:01 (21) 20:07	06:44 20:43	05:59 21:11	
25	07:59 17:11	16:42 (19) 17:52	11 19:28 20:07	11 08:19 (20) 20:07	20:43 21:11	21:11 21:11	
26	07:59 17:11	16:14 (19) 17:26	07:39 19:29	3 07:59 (21) 20:08	06:42 20:44	05:58 21:11	
27	07:59 17:11	16:43 (19) 17:53	3 19:29 20:08	3 08:02 (21) 20:08	20:44 21:11	21:11 21:11	
28	07:58 17:12	16:13 (19) 17:25	07:37 19:30	5 07:57 (21) 20:09	06:41 20:45	05:57 21:11	
29	07:58 17:12	16:44 (19) 17:54	5 19:30 20:09	5 08:02 (21) 20:09	20:45 21:11	21:11 21:11	
30	07:58 17:13	16:14 (19) 17:23	07:35 19:32	7 07:55 (21) 20:10	06:39 20:46	05:56 21:12	
31	07:58 17:13	16:46 (19) 17:56	7 19:32 20:10	7 08:02 (21) 20:10	20:46 21:12	21:12 21:12	
32	07:57 17:14	16:13 (19) 17:22	07:33 19:33	8 07:54 (21) 20:12	06:37 20:48	05:55 21:12	
33	07:57 17:14	16:47 (19) 17:57	8 19:33 20:12	8 08:02 (21) 20:12	20:48 21:12	21:12 21:12	
34	07:56 17:16	16:13 (19) 17:20	07:31 19:34	10 07:52 (21) 20:13	06:36 20:49	05:54 21:13	
35	07:56 17:16	16:47 (19) 17:59	10 19:34 20:13	10 08:02 (21) 20:13	20:49 21:13	21:13 21:13	
36	07:56 17:17	16:13 (19) 17:19	07:30 19:36	10 07:50 (21) 20:14	06:34 20:50	05:53 21:13	
37	07:55 17:17	16:48 (19) 18:00	10 19:36 20:14	10 08:00 (21) 20:14	20:50 21:13	21:13 21:13	
38	07:55 17:18	16:13 (19) 17:17	07:28 19:37	10 07:48 (21) 20:15	06:32 20:51	05:52 21:13	
39	07:55 17:18	16:49 (19) 18:00	10 19:37 20:15	10 07:58 (21) 20:15	20:51 21:13	21:13 21:13	
40	07:54 17:20	16:13 (19) 17:15	07:26 19:38	4 07:51 (21) 20:16	06:31 20:52	05:51 21:13	
41	07:54 17:20	16:50 (19) 18:01	4 19:38 20:16	4 07:55 (21) 20:16	20:52 21:13	21:13 21:13	
42	07:53 17:21	16:13 (19) 17:14	07:24 19:39	06:29 20:18	05:50 20:53	05:41 21:14	
43	07:53 17:21	16:50 (19) 18:03	19:39 20:18	20:18 20:53	20:53 21:14	21:14 21:14	
44	07:53 17:22	16:13 (19) 17:12	07:22 19:41	06:27 20:19	05:49 20:54	05:41 21:14	
45	07:53 17:22	16:50 (19) 18:04	19:41 20:19	20:19 20:54	20:54 21:14	21:14 21:14	
46	07:52 17:24	16:13 (19) 17:10	07:20 19:42	06:26 20:20	05:49 20:55	05:41 21:14	
47	07:52 17:24	16:51 (19) 18:05	19:42 20:20	20:20 20:55	20:55 21:14	21:14 21:14	
48	07:51 17:25	16:13 (19) 17:09	07:19 19:43	06:24 20:21	05:48 20:56	05:41 21:14	
49	07:51 17:25	16:51 (19) 18:07	19:43 20:21	20:21 20:56	20:56 21:14	21:14 21:14	
50	07:50 17:26	16:14 (19) 17:07	07:17 19:44	06:23 20:23	05:47 20:57	05:42 21:14	
51	07:50 17:26	16:51 (19) 18:08	19:44 20:23	20:23 20:57	20:57 21:14	21:14 21:14	
52	07:49 17:28	16:14 (19) 17:05	07:15 19:46	06:21 20:24	05:46 20:58	05:42 21:14	
53	07:49 17:28	16:52 (19) 18:10	19:46 20:24	20:24 20:58	20:58 21:14	21:14 21:14	
54	07:48 17:29	16:15 (19)	07:13 19:47	06:20 20:25	05:46 20:59	05:43 21:14	
55	07:48 17:29	16:52 (19)	19:47	20:25	20:59	21:14	
56	07:47 17:31	16:15 (19)	07:11 19:48	06:18 20:26	05:45 21:00	05:43 21:14	
57	07:47 17:31	16:52 (19)	19:48	20:26	21:00	21:14	
58	07:46 17:32	16:16 (19)	07:09 19:49	07:09 19:49	05:44 21:01	05:44 21:14	
59	07:46 17:32	16:52 (19)	19:49	21:01	21:14	21:14	
Potential sun hours	287	292	369	403	458	464	
Total, worst case	836	275	192				
Sun reduction	0.57	0.59	0.59				
Oper. time red.	0.98	0.98	0.98				
Wind dir. red.	0.56	0.56	0.62				
Total reduction	0.31	0.32	0.35				
Total, real	260	89	68				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H321 - H321

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:44	06:11	06:47	07:22	07:45 (20)	07:02	15:57 (19)	07:41	15:57 (19)
	21:14	20:52	20:05	19:09	16 08:01 (20)	17:15	14 16:11 (19)	16:47	23 16:20 (19)
2	05:44	06:12	06:48	07:23	07:44 (20)	07:03	15:55 (19)	07:42	15:58 (19)
	21:14	20:51	20:03	19:07	18 08:02 (20)	17:14	19 16:14 (19)	16:47	21 16:19 (19)
3	05:45	06:13	06:49	07:25	07:46 (20)	07:04	15:52 (19)	07:43	15:59 (19)
	21:14	20:50	20:01	19:05	17 08:03 (20)	17:12	24 16:16 (19)	16:46	20 16:19 (19)
4	05:45	06:14	06:50	07:26	07:47 (20)	07:06	15:51 (19)	07:44	16:00 (19)
	21:13	20:49	19:59	19:03	15 08:02 (20)	17:11	26 16:17 (19)	16:46	18 16:18 (19)
5	05:46	06:15	06:52	07:27	07:48 (20)	07:07	15:50 (19)	07:45	16:02 (19)
	21:13	20:47	19:57	19:02	14 08:02 (20)	17:10	28 16:18 (19)	16:46	17 16:19 (19)
6	05:47	06:17	06:53	07:28	07:49 (20)	07:08	15:49 (19)	07:46	16:03 (19)
	21:13	20:46	19:56	19:00	12 08:01 (20)	17:09	31 16:20 (19)	16:46	16 16:19 (19)
7	05:47	06:18	06:54	07:29	07:51 (20)	07:10	15:48 (19)	07:47	16:05 (19)
	21:12	20:45	19:54	18:56	10 08:01 (20)	17:07	32 16:20 (19)	16:45	13 16:18 (19)
8	05:48	06:19	06:55	07:31	07:52 (20)	07:11	15:48 (19)	07:48	16:06 (19)
	21:12	20:43	19:52	18:54	8 08:00 (20)	17:06	34 16:22 (19)	16:45	12 16:18 (19)
9	05:49	06:20	06:56	07:32	07:53 (20)	07:13	15:47 (19)	07:49	16:08 (19)
	21:12	20:42	19:50	18:53	6 07:59 (20)	17:05	35 16:22 (19)	16:45	10 16:18 (19)
10	05:50	06:21	06:57	07:33	07:54 (20)	07:14	15:46 (19)	07:50	16:11 (19)
	21:11	20:41	19:48	18:51	3 07:57 (20)	17:04	36 16:22 (19)	16:45	5 16:16 (19)
11	05:50	06:22	06:59	07:34	07:55 (20)	07:15	15:47 (19)	07:51	
	21:11	20:39	19:46	18:49		17:03	36 16:23 (19)	16:45	
12	05:51	06:24	07:00	07:36	07:56 (20)	07:17	15:46 (19)	07:52	
	21:10	20:38	19:45	18:47		17:01	37 16:23 (19)	16:45	
13	05:52	06:25	07:01	07:37	07:57 (20)	07:18	15:46 (19)	07:53	
	21:10	20:36	19:43	18:45		17:00	38 16:24 (19)	16:45	
14	05:53	06:26	07:02	07:38	07:58 (20)	07:19	15:46 (19)	07:54	
	21:09	20:35	19:41	18:44		16:59	37 16:23 (19)	16:46	
15	05:54	06:27	07:03	07:39	07:59 (20)	07:21	15:47 (19)	07:54	
	21:08	20:33	19:39	18:42		16:58	37 16:24 (19)	16:46	
16	05:55	06:28	07:04	07:41	08:00 (20)	07:22	15:46 (19)	07:55	
	21:08	20:32	19:37	18:40		16:57	38 16:24 (19)	16:46	
17	05:56	06:29	07:06	07:42	08:01 (20)	07:23	15:47 (19)	07:56	
	21:07	20:30	19:35	18:39		16:56	38 16:25 (19)	16:46	
18	05:57	06:31	07:07	07:43	08:02 (20)	07:25	15:47 (19)	07:56	
	21:06	20:28	19:33	18:37		16:55	37 16:24 (19)	16:47	
19	05:57	06:32	07:08	07:45	08:03 (20)	07:26	15:47 (19)	07:57	
	21:06	20:27	19:31	18:35		16:55	37 16:24 (19)	16:47	
20	05:58	06:33	07:09	07:46	08:04 (20)	07:27	15:48 (19)	07:58	
	21:05	20:25	19:30	18:34		16:54	37 16:25 (19)	16:47	
21	05:59	06:34	07:10	07:47	08:05 (20)	07:29	15:48 (19)	07:58	
	21:04	20:24	19:28	18:32		16:53	36 16:24 (19)	16:48	
22	06:00	06:35	07:11	07:48	08:06 (20)	07:30	15:49 (19)	07:59	
	21:03	20:22	19:26	9 07:42 (21)	18:30	16:52	35 16:24 (19)	16:48	
23	06:01	06:36	07:13	07:50	08:07 (20)	07:31	15:50 (19)	07:59	
	21:02	20:20	19:24	10 07:44 (21)	18:29	16:51	34 16:24 (19)	16:49	
24	06:02	06:38	07:14	07:51	08:08 (20)	07:32	15:50 (19)	08:00	
	21:01	20:19	19:22	10 07:45 (21)	18:27	16:51	34 16:24 (19)	16:49	
25	06:03	06:39	07:15	07:52	08:09 (20)	07:34	15:51 (19)	08:00	
	21:00	20:17	19:20	9 07:45 (21)	18:26	16:50	32 16:23 (19)	16:50	
26	06:04	06:40	07:16	07:54	08:10 (20)	07:35	15:52 (19)	08:00	
	20:59	20:15	19:18	8 07:45 (21)	18:24	16:49	31 16:23 (19)	16:51	
27	06:06	06:41	07:17	07:55	08:11 (20)	07:36	15:53 (19)	08:01	
	20:58	20:13	19:16	6 07:44 (21)	18:23	16:49	29 16:22 (19)	16:51	
28	06:07	06:42	07:18	07:56	08:12 (20)	07:37	15:53 (19)	08:01	
	20:57	20:12	19:15	4 07:43 (21)	18:21	16:48	28 16:21 (19)	16:52	
29	06:08	06:43	07:20	07:58	08:13 (20)	07:38	15:55 (19)	08:01	
	20:56	20:10	19:13	9 07:58 (20)	18:20	16:48	27 16:22 (19)	16:53	
30	06:09	06:45	07:21	07:59	08:14 (20)	07:40	15:56 (19)	08:01	
	20:55	20:08	19:11	13 08:00 (20)	18:18	16:47	25 16:21 (19)	16:54	
31	06:10	06:46		08:00	17:02 (19)			08:02	
	20:54	20:06		18:17	5 17:07 (19)			16:54	
Potential sun hours	471	435	377	341	289			276	
Total, worst case			78	124	962			155	
Sun reduction			0.69	0.63	0.50			0.49	
Oper. time red.			0.98	0.98	0.98			0.98	
Wind dir. red.			0.61	0.62	0.56			0.56	
Total reduction			0.41	0.38	0.27			0.27	
Total, real			32	47	263			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H322 - H322

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:08 (21)	06:11	06:47	19:26 (19)	07:22	07:02	07:41	
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	5 06:13 (21)	20:52	20:05	13 19:39 (19)	19:09	17:15	16:47	
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:09 (21)	06:12	06:48	19:25 (19)	07:23	07:03	07:42	
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	3 06:12 (21)	20:51	20:03	13 19:38 (19)	19:07	17:14	16:47	
3	08:02	07:42	07:00	07:04	19:30 (19)	06:14	05:43	06:09 (21)	06:13	06:49	19:24 (19)	07:24	07:04	07:43	
	16:57	17:36	18:14	19:53	1 19:31 (19)	20:30	21:03	1 06:10 (21)	20:50	20:01	12 19:36 (19)	19:05	17:12	16:46	
4	08:02	07:41	06:59	07:02	19:28 (19)	06:12	05:42	06:09 (21)	06:14	06:50	19:23 (19)	07:26	07:06	07:44	
	16:58	17:38	18:15	19:54	5 19:33 (19)	20:31	21:04	06:09 (21)	20:49	19:59	12 19:35 (19)	19:03	17:11	16:46	
5	08:02	07:40	06:57	07:00	19:27 (19)	06:11	05:42	06:09 (21)	06:15	06:51	19:22 (19)	07:27	07:07	07:45	
	16:59	17:39	18:16	19:55	7 19:34 (19)	20:32	21:05	06:09 (21)	20:47	19:57	11 19:33 (19)	19:02	17:10	16:46	
6	08:02	07:39	06:55	06:58	19:26 (19)	06:10	05:41	06:09 (21)	06:17	06:53	19:22 (19)	07:28	07:08	07:46	
	17:00	17:40	18:17	19:57	9 19:35 (19)	20:34	21:06	06:09 (21)	21:13	19:56	9 19:31 (19)	19:00	17:08	16:46	
7	08:01	07:37	06:53	06:57	19:26 (19)	06:08	05:41	06:09 (21)	06:18	06:54	19:22 (19)	07:29	07:10	07:47	
	17:01	17:42	18:19	19:58	10 19:36 (19)	20:35	21:06	06:09 (21)	21:12	19:54	7 19:29 (19)	18:56	17:07	16:45	
8	08:01	07:36	07:51	06:55	19:26 (19)	06:07	05:41	06:09 (21)	06:19	06:55	19:22 (19)	07:31	07:11	07:48	
	17:02	17:43	18:20	19:59	11 19:37 (19)	20:36	21:07	06:09 (21)	20:43	19:52	5 19:27 (19)	18:54	17:06	16:45	
9	08:01	07:35	07:50	06:53	19:26 (19)	06:06	05:40	06:09 (21)	06:20	06:56	19:24 (19)	07:32	07:12	07:49	
	17:04	17:45	18:21	20:00	12 19:38 (19)	20:37	21:08	06:09 (21)	20:42	19:50	2 19:26 (19)	18:52	17:05	16:45	
10	08:01	07:33	07:48	06:51	19:26 (19)	06:04	05:40	06:04 (21)	05:50	06:21	06:57	07:33	07:14	07:50	
	17:05	17:46	18:23	20:02	13 19:39 (19)	20:38	21:08	3 06:07 (21)	21:11	19:48		18:51	17:04	16:45	
11	08:00	07:32	07:46	06:49	19:27 (19)	06:03	05:40	06:04 (21)	05:50	06:22	06:58	07:34	07:15	07:51	
	17:06	17:47	18:24	20:03	13 19:40 (19)	20:40	21:09	4 06:08 (21)	21:11	19:46		18:49	17:02	16:45	
12	08:00	07:31	07:44	06:48	19:29 (19)	06:02	05:40	06:04 (21)	05:51	06:23	07:00	07:36	07:17	07:52	
	17:07	17:49	18:25	20:04	9 19:38 (19)	20:41	21:09	5 06:09 (21)	21:10	19:45		18:47	17:01	16:45	
13	08:00	07:29	07:42	06:46	19:26 (19)	06:01	05:40	06:04 (21)	05:52	06:25	07:01	07:37	07:18	07:53	
	17:08	17:50	18:27	20:05	20:42	21:10	21:10	6 06:10 (21)	21:10	19:43		18:45	17:00	16:45	
14	07:59	07:28	07:41	06:44	19:25 (19)	05:59	05:40	06:04 (21)	05:53	07:02		07:38	07:19	07:53	
	17:09	17:52	18:28	20:07	20:43	21:10	21:09	7 06:11 (21)	21:09	20:35		18:44	16:59	16:45	
15	07:59	07:26	07:39	06:42	19:25 (19)	05:58	05:40	06:04 (21)	05:54	06:27		07:03	07:21	07:54	
	17:11	17:53	18:29	20:08	20:44	21:11	21:08	8 06:12 (21)	21:09	20:33		18:42	16:58	16:46	
16	07:58	07:25	07:37	06:41	19:25 (19)	05:57	05:40	06:04 (21)	05:55	06:28		07:04	07:22	07:55	
	17:12	17:54	18:30	20:09	20:45	21:11	21:08	8 06:12 (21)	21:08	20:32		18:40	16:57	16:46	
17	07:58	07:23	07:35	06:39	19:24 (19)	05:56	05:40	06:04 (21)	05:56	06:29		07:05	07:42	07:23	07:56
	17:13	17:56	18:32	20:10	20:46	21:12	21:07	9 06:13 (21)	21:07	20:30		19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	19:23 (19)	05:55	05:40	06:04 (21)	05:56	06:30		07:07	07:43	07:25	07:56
	17:14	17:57	18:33	20:11	20:47	21:12	21:06	9 06:13 (21)	21:06	20:28		19:33	18:37	16:55	16:47
19	07:56	07:20	07:31	06:36	19:22 (19)	05:54	05:40	06:04 (21)	05:57	06:32		07:08	07:44	07:26	07:57
	17:16	17:59	18:34	20:13	20:49	21:13	21:05	9 06:13 (21)	21:05	20:27		19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	19:21 (19)	05:53	05:40	06:04 (21)	05:58	06:33		07:09	07:46	07:27	07:58
	17:17	18:00	18:35	20:14	20:50	21:13	21:05	9 06:13 (21)	21:05	20:25		19:29	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	19:20 (19)	05:52	05:40	06:04 (21)	05:59	06:34		07:10	07:47	07:28	07:58
	17:18	18:00	18:37	20:15	20:51	21:13	21:04	9 06:13 (21)	21:04	20:24		19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	19:19 (19)	05:51	05:40	06:05 (21)	06:00	06:35		07:11	07:48	07:30	07:59
	17:20	18:01	18:38	20:16	20:52	21:13	21:03	9 06:14 (21)	21:03	20:22		19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	19:18 (19)	05:50	05:41	06:05 (21)	06:01	06:36		07:13	07:50	07:31	07:59
	17:21	18:03	18:39	20:18	20:53	21:14	21:02	9 06:14 (21)	21:02	20:20		19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	19:17 (19)	05:49	05:41	06:05 (21)	06:02	06:37		07:14	07:51	07:32	08:00
	17:22	18:04	18:40	20:19	20:54	21:14	21:01	9 06:14 (21)	21:01	20:19		19:22	18:27	16:51	16:49
25	07:52	07:10	07:20	06:26	19:16 (19)	05:49	05:41	06:05 (21)	06:03	06:39		07:15	07:52	07:34	08:00
	17:24	18:05	18:42	20:20	20:55	21:14	21:00	9 06:14 (21)	21:00	20:17		19:20	18:26	16:50	16:50
26	07:51	07:09	07:18	06:24	19:15 (19)	05:48	05:41	06:06 (21)	06:04	06:40		07:16	07:54	07:35	08:00
	17:25	18:07	18:43	20:21	20:56	21:14	21:00	8 06:14 (21)	20:59	20:15		19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	19:14 (19)	05:47	05:42	06:06 (21)	06:06	06:41		07:17	07:55	07:36	08:01
	17:26	18:08	18:44	20:23	20:57	21:14	21:00	8 06:14 (21)	20:58	20:13		19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	19:13 (19)	05:46	05:42	06:07 (21)	06:07	06:42		07:18	07:56	07:37	08:01
	17:28	18:09	18:45	20:24	20:58	21:14	21:00	7 06:14 (21)	20:57	20:12		19:14	18:21	16:48	16:52
29	07:48	07:04	07:13	06:20	19:12 (19)	05:46	05:43	06:07 (21)	06:08	06:43		07:20	07:58	07:38	08:01
	17:29	18:10	18:46	20:25	20:59	21:14	21:00	7 06:14 (21)	20:56	20:10		19:13	18:19	16:48	16:53
30	07:47	07:03	07:11	06:18	19:11 (19)	05:45	05:43	06:08 (21)	06:09	06:44		07:21	07:59	07:40	08:01
	17:31	18:12	18:48	20:26	21:00	21:14	21:00	6 06:14 (21)	20:55	20:08		19:11	18:18	16:47	16:54
31	07:46	07:02	07:09	06:17	19:10 (19)	05:44	05:40	06:09 (21)	06:10	06:46		07:22	08:00	07:41	08:02
	17:32	18:13	18:49	20:27	21:01	21:15	21:00	6 06:14 (21)	20:54	20:06	9 19:38 (19)	18:17	18:17	16:47	16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276			
Total, worst case				90		158	9	9	84						
Sun reduction				0.61		0.70	0.76	0.74	0.69						
Oper. time red.				0.98		0.98	0.98	0.98	0.98						
Wind dir. red.				0.61		0.56	0.56	0.61	0.61						
Total reduction				0.37		0.38	0.42	0.44	0.41						
Total, real				33		61	4	4	35						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H323 - H323

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02	07:44	16:52 (27)	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	10 17:02 (27)	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	16:54 (27)	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	6 17:00 (27)	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42		07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36		18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41		06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38		18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40		06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39		18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39		06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40		18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37		06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42		18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36		06:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43		18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35		06:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:12	16:25 (27) 07:49
	17:04	17:45		19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	6 16:31 (27) 16:45
10	08:01	07:33		06:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	16:22 (27) 07:50
	17:05	17:46		19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:04	11 16:33 (27) 16:45
11	08:00	07:32		06:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	16:22 (27) 07:51
	17:06	17:47		19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	12 16:34 (27) 16:45
12	08:00	07:30		06:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:16	16:21 (27) 07:52
	17:07	17:49		19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	14 16:35 (27) 16:45
13	08:00	07:29		06:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	16:21 (27) 07:53
	17:08	17:50		19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	14 16:35 (27) 16:45
14	07:59	07:28		06:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	16:20 (27) 07:53
	17:09	17:52		19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59	14 16:34 (27) 16:45
15	07:59	07:26		06:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	16:21 (27) 07:54
	17:11	17:53		19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	12 16:33 (27) 16:46
16	07:58	07:25		06:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	16:20 (27) 07:55
	17:12	17:54		19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	12 16:32 (27) 16:46
17	07:57	07:23		06:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	16:20 (27) 07:56
	17:13	17:56		19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:53	10 16:30 (27) 16:46
18	07:57	07:22		06:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:24	16:21 (27) 07:56
	17:14	17:57		19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	9 16:30 (27) 16:47
19	07:56	07:20		06:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26	16:21 (27) 07:57
	17:16	17:59		19:34	20:13	20:49	21:12	21:05	20:27	19:31	18:35	16:54	7 16:28 (27) 16:47
20	07:56	16:48 (27)	07:19	06:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	16:23 (27) 07:58
	17:17	2 16:50 (27)	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:34	16:54	5 16:28 (27) 16:47
21	07:55	16:48 (27)	07:17	06:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	16:23 (27) 07:58
	17:18	4 16:52 (27)	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	4 16:27 (27) 16:48
22	07:54	16:48 (27)	07:15	06:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	16:24 (27) 07:59
	17:20	5 16:53 (27)	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	2 16:26 (27) 16:48
23	07:53	16:47 (27)	07:14	06:24	06:29	05:50	05:41	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	7 16:54 (27)	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	16:47 (27)	07:12	06:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	9 16:56 (27)	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:49
25	07:52	16:47 (27)	07:10	06:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	10 16:57 (27)	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	16:47 (27)	07:09	06:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	12 16:59 (27)	18:07	19:43	20:21	20:56	21:14	21:00	20:15	19:18	18:24	16:49	16:51
27	07:50	16:48 (27)	07:07	06:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	12 17:00 (27)	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	16:48 (27)	07:05	06:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	14 17:02 (27)	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48	16:49 (27)		06:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29	14 17:03 (27)		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47	16:50 (27)		06:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:31	14 17:04 (27)		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46	16:51 (27)		06:09		05:44		06:10	06:46		08:00		08:01
	17:32	13 17:04 (27)		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287		292	369	403	458	464	471	435	377	341	289	276
Total, worst case	116		16									132	
Sun reduction	0.57		0.59									0.50	
Oper. time red.	0.98		0.98									0.98	
Wind dir. red.	0.56		0.56									0.56	
Total reduction	0.31		0.32									0.27	
Total, real	36		5									36	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H324 - H324

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:55	07:44 17:33	07:04 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	07:22 19:09	07:02 17:15	07:41 16:47
2	08:02 16:56	07:43 17:35	07:02 18:12	07:05 19:52	06:15 20:29	05:43 21:02	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:14	07:42 16:46
3	08:02 16:57	07:42 17:36	07:00 18:13	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:02 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:49	06:50 19:59	07:26 19:03	07:06 17:11	07:44 16:46
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:55	06:11 20:32	05:42 21:05	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:57	06:09 20:33	05:41 21:05	05:47 21:13	06:17 20:46	06:53 19:55	07:28 19:00	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:35	05:41 21:06	05:47 21:12	06:18 20:45	06:54 19:54	07:29 18:56	07:10 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	06:51 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:31 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:35 17:45	06:50 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:05	07:49 16:45
10	08:01 17:05	07:33 17:46	06:48 19:23	06:51 20:02	06:04 20:38	05:40 21:08	05:50 21:11	06:21 20:40	06:57 19:48	07:33 18:51	07:14 17:04	07:50 16:45
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:03	06:03 20:39	05:40 21:09	05:50 21:11	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:48 20:04	06:02 20:41	05:40 21:09	05:51 21:10	06:23 20:37	07:00 19:44	07:35 18:47	07:16 17:01	07:52 16:45
13	08:00 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:00 20:42	05:40 21:10	05:52 21:10	06:25 20:36	19:55 (21) 20:02 (21)	07:01 19:43	07:17 18:45	07:53 17:00
14	07:59 17:09	07:28 17:52	06:41 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	7 11	19:53 (21) 20:04 (21)	07:02 19:41	07:53 16:59
15	07:59 17:10	07:26 17:53	06:39 19:29	06:42 20:08	05:58 20:44	05:40 21:11	05:54 21:08	06:27 20:33	14	19:52 (21) 20:06 (21)	07:03 19:39	07:54 16:46
16	07:58 17:12	07:25 17:54	06:37 19:30	06:41 20:09	05:57 20:45	05:40 21:11	05:55 21:08	06:28 20:31	15	19:51 (21) 20:06 (21)	07:04 19:37	07:55 16:46
17	07:57 17:13	07:23 17:56	06:35 19:32	06:39 20:10	05:56 20:46	05:40 21:12	05:55 21:07	06:29 20:30	15	19:50 (21) 20:05 (21)	07:05 19:35	07:56 16:46
18	07:57 17:14	07:22 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	14	19:49 (21) 20:03 (21)	07:07 19:33	07:56 16:46
19	07:56 17:16	07:20 17:59	06:31 19:34	06:35 20:13	19:46 (21) 19:50 (21)	05:40 20:48	05:57 21:12	06:32 20:27	13	19:49 (21) 20:02 (21)	07:08 19:31	07:57 16:47
20	07:55 17:17	07:18 18:00	06:30 19:35	06:34 20:14	19:45 (21) 19:51 (21)	05:40 20:50	05:58 21:13	06:33 20:25	12	19:48 (21) 20:00 (21)	07:09 19:29	07:57 16:47
21	07:55 17:18	07:17 18:00	06:28 19:37	06:32 20:15	19:44 (21) 19:53 (21)	05:40 20:51	05:59 21:13	06:34 20:23	10	19:48 (21) 19:58 (21)	07:10 19:28	07:58 16:48
22	07:54 17:20	07:15 18:01	06:26 19:38	06:30 20:16	19:43 (21) 19:54 (21)	05:40 20:52	05:40 21:13	06:00 20:22	8	19:48 (21) 19:56 (21)	07:11 19:26	07:59 16:48
23	07:53 17:21	07:14 18:03	06:24 19:39	06:29 20:18	19:43 (21) 19:54 (21)	05:50 20:53	06:01 21:13	06:36 20:20	6	19:49 (21) 19:55 (21)	07:12 19:24	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:19	19:43 (21) 19:56 (21)	05:49 20:54	05:41 21:14	06:02 20:18	4	19:50 (21) 19:54 (21)	07:14 19:22	07:59 16:49
25	07:51 17:24	07:10 18:05	06:20 19:42	06:26 20:20	19:43 (21) 19:57 (21)	05:48 20:55	05:41 21:14	06:03 20:17		07:15 19:20	07:32 18:25	08:00 16:50
26	07:51 17:25	07:09 18:07	06:18 19:43	06:24 20:21	19:43 (21) 19:58 (21)	05:48 20:56	05:41 21:14	06:04 20:59		07:16 19:18	07:35 18:24	08:00 16:50
27	07:50 17:26	07:07 18:08	06:17 19:44	06:23 20:22	19:43 (21) 19:59 (21)	05:47 20:57	05:42 21:14	06:05 20:58		07:17 19:16	07:55 18:22	08:01 16:51
28	07:49 17:28	07:05 18:09	06:15 19:45	06:21 20:24	19:45 (21) 19:58 (21)	05:46 20:58	05:42 21:14	06:07 20:57		07:18 19:14	07:56 18:21	08:01 16:52
29	07:48 17:29		06:13 19:47	06:19 20:25	19:45 (21) 19:56 (21)	05:46 20:59	05:43 21:14	06:08 20:56		07:20 19:13	07:58 18:19	08:01 16:53
30	07:47 17:30		06:11 19:48	06:18 20:26	19:48 (21) 19:53 (21)	05:45 21:00	05:43 21:14	06:09 20:55		07:21 19:11	07:59 18:18	08:01 16:53
31	07:46 17:32		07:09 19:49			05:44 21:00		06:10 20:53		08:00 18:16		08:01 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case				128				129				
Sun reduction				0.61				0.74				
Oper. time red.				0.98				0.98				
Wind dir. red.				0.62				0.62				
Total reduction				0.37				0.45				
Total, real				48				58				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H325 - H325

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H326 - H326

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H327 - H327

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H328 - H328

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H330 - H330

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:13	16:46
3	08:01	07:42	07:00	07:03	06:13	05:42	05:44	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:42	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:04	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:00	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:25	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:11	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:07	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:32	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:47	05:41	06:04	06:39	07:16	07:53	07:34	08:00
	17:25	18:06	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:48	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H331 - H331

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:43 21:01	05:43 21:14	06:11 20:52	06:46 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:34	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:44 21:13	06:12 20:51	06:48 20:03	07:23 19:07	07:03 17:13	07:42 16:46
3	08:01 16:57	07:42 17:36	07:00 18:13	07:03 19:53	06:13 20:30	05:42 21:03	05:44 21:13	06:13 20:50	06:49 20:01	07:24 19:05	07:04 17:12	07:43 16:46
4	08:01 16:58	07:41 17:37	06:58 18:14	07:02 19:54	06:12 20:31	05:42 21:04	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	06:11 20:32	05:41 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:09	07:45 16:45
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:46 21:12	06:16 20:46	06:52 19:55	07:28 18:58	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:41	06:53 18:18	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:17 20:44	06:53 19:53	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	07:51 18:20	06:54 19:59	06:06 20:36	05:40 21:07	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:01 17:03	07:34 17:44	07:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:42	06:56 19:50	07:32 18:52	07:12 17:04	07:49 16:45
10	08:00 17:04	07:33 17:46	07:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:49 21:11	06:21 20:40	06:57 19:48	07:33 18:50	07:14 17:03	07:50 16:45
11	08:00 17:05	07:32 17:47	07:46 19:24	06:49 20:03	06:03 20:39	05:40 21:09	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:51 16:45
12	08:00 17:07	07:30 17:49	07:44 19:25	06:47 20:04	06:01 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	07:42 19:26	06:46 20:05	06:00 20:42	05:39 21:10	05:52 21:09	06:24 20:36	07:00 19:42	07:37 18:45	07:18 17:00	07:52 16:45
14	07:59 17:09	07:27 17:51	07:40 19:28	06:44 20:06	05:59 20:43	05:39 21:10	05:53 21:09	06:25 20:34	07:02 19:40	07:38 18:43	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	07:38 19:29	06:42 20:07	05:58 20:44	05:39 21:11	05:53 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:45
16	07:58 17:11	07:24 17:54	07:37 19:30	06:40 20:09	05:57 20:45	05:39 21:11	05:54 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:22 16:57	07:55 16:46
17	07:57 17:13	07:23 17:56	07:35 19:31	06:39 20:10	05:56 20:46	05:39 21:12	05:55 21:07	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:57 17:14	07:21 17:57	07:33 19:33	06:37 20:11	05:55 20:47	05:39 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	07:31 19:34	06:35 20:12	05:54 20:48	05:39 21:12	05:57 21:05	06:31 20:26	07:07 19:31	07:44 18:35	07:26 16:54	07:57 16:47
20	07:55 17:17	07:18 18:00	07:29 19:35	06:34 20:14	05:53 20:49	05:40 21:13	05:58 21:04	06:32 20:25	07:09 19:29	07:45 18:33	07:27 16:53	07:57 16:47
21	07:55 17:18	07:17 18:00	07:27 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:47
22	07:54 17:19	07:15 18:01	07:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:03	06:35 20:22	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:02	07:24 19:39	06:29 20:17	05:50 20:53	05:40 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:28	07:31 16:51	07:59 16:48
24	07:52 17:22	07:12 18:04	07:22 19:40	06:27 20:19	05:49 20:54	05:40 21:13	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:50	07:59 16:49
25	07:51 17:23	07:10 18:05	07:20 19:41	06:25 20:20	05:48 20:55	05:41 21:14	06:03 21:00	06:38 20:17	07:15 19:20	07:52 18:25	07:33 16:50	08:00 16:50
26	07:50 17:25	07:08 18:06	07:18 19:43	06:24 20:21	05:47 20:56	05:41 21:14	06:04 20:59	06:39 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:50
27	07:49 17:26	07:07 18:08	07:16 19:44	06:22 20:22	05:47 20:57	05:42 21:14	06:05 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:36 16:48	08:00 16:51
28	07:48 17:27	07:05 18:09	07:14 19:45	06:21 20:23	05:46 20:57	05:42 21:14	06:06 20:57	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:01 16:52
29	07:47 17:29	07:04 19:46	07:13 20:25	06:19 20:58	05:45 20:58	05:42 21:14	06:07 20:56	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:47	08:01 16:52
30	07:46 17:30	07:03 19:48	07:11 20:26	06:18 20:59	05:45 20:59	05:43 21:14	06:08 20:54	06:44 20:08	07:21 19:10	07:59 18:18	07:39 16:47	08:01 16:53
31	07:45 17:32	07:02 19:49	07:09 20:26	06:17 21:00	05:44 21:00	06:10 20:53	06:45 20:06	06:45 20:06	08:00 18:16	08:00 16:54	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H334 - H334

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:13	16:46
3	08:02	07:42	07:00	07:03	06:13	05:42	05:44	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:56	07:00	06:11	05:41	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:06	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:04	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:00	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:25	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:38	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:11	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:07	07:44	07:26	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:32	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:47	05:41	06:04	06:39	07:16	07:53	07:34	08:00
	17:25	18:06	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:48	16:51
28	07:48	07:05	07:14	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H335 - H335

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
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	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
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	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H336 - H336

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:28	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:24	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:46		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:55	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H337 - H337

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:03	07:07	06:16	05:43	05:43	06:11	06:47	07:22	07:01	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:34	18:12	19:51	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:09	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:44	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:05	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:01	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:39	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:13	21:04	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:58
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:02	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:40	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:25	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:09	07:18	06:24	05:47	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:24	20:58	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:47	16:52
30	07:47		07:11	06:18	05:45	05:43	06:08	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H338 - H338

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:01	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:17	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:40	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:39	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:53	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:31	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:57
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:13	21:02	20:20	19:24	18:28	16:51	16:48
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:52
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H339 - H339

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:43	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:04	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:13	05:42	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:45
6	08:02	07:38	06:55	06:58	06:09	05:41	05:46	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:33	21:05	21:13	20:46	19:55	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:40	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:43	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:40	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:12	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:27	18:32	16:53	16:47
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:22	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:42	06:07	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:12	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H340 - H340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:44	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:35	07:16	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:33	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H341 - H341

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:51	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H342 - H342

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:44	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H343 - H343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02	07:45	08:07 (18)	07:04	07:07	07:28 (15)	06:17	05:44
	16:56	17:33	23 17:08 (16)	18:11	19:51	19:29 (12)	20:28	21:02
2	08:02	07:43	08:05 (18)	07:02	07:06	07:27 (15)	06:15	05:43
	16:56	17:35	27 17:09 (16)	18:12	19:52	19:30 (12)	20:29	21:02
3	08:02	07:42	08:04 (18)	07:00	07:04	07:26 (15)	06:14	05:43
	16:57	17:36	30 17:11 (16)	18:14	19:53	19:32 (12)	20:30	21:03
4	08:02	07:41	08:03 (18)	06:59	07:02	07:25 (15)	06:12	05:42
	16:58	17:38	31 17:12 (16)	18:15	19:54	19:31 (12)	20:31	21:04
5	08:02	07:40	08:02 (18)	06:57	07:00	07:24 (15)	06:11	05:42
	16:59	17:39	34 17:14 (16)	18:16	19:55	19:30 (12)	20:32	21:05
6	08:02	07:39	08:00 (18)	06:55	06:58	07:23 (15)	06:10	05:41
	17:00	17:40	34 17:13 (16)	18:18	19:57	19:29 (12)	20:34	21:06
7	08:02	07:37	08:01 (18)	06:53	06:57	07:23 (15)	06:08	05:41
	17:01	17:42	30 17:12 (16)	18:19	19:58	19:28 (12)	20:35	21:06
8	08:01	07:36	08:02 (18)	07:52	06:55	07:23 (15)	06:07	05:41
	17:02	17:43	26 17:11 (16)	18:20	19:59	19:26 (12)	20:36	21:07
9	08:01	07:35	08:03 (18)	07:50	06:53	07:22 (15)	06:06	05:41
	17:04	17:45	16 17:07 (16)	19:21	20:00	19:22 (12)	20:37	21:08
10	08:01	07:33	08:05 (18)	07:48	06:51	07:22 (15)	06:04	05:40
	17:05	17:46	11 08:16 (18)	19:23	20:02	08:02 (15)	20:38	21:08
11	08:00	07:32		07:46	06:49	07:23 (15)	06:03	05:40
	17:06	17:48		19:24	20:03	08:02 (15)	20:40	21:09
12	08:00	07:31		07:44	06:48	07:23 (15)	06:02	05:40
	17:07	17:49		19:25	20:04	08:01 (15)	20:41	21:10
13	08:00	07:29		07:43	06:46	07:23 (15)	06:01	05:40
	17:08	17:50		19:27	20:05	08:00 (15)	20:42	21:10
14	07:59	07:28		07:41	06:44	07:23 (15)	05:59	05:40
	17:09	17:52		19:28	20:07	07:59 (15)	20:43	21:11
15	07:59	07:26		07:39	06:42	07:24 (15)	05:58	05:40
	17:11	17:53		19:29	20:08	07:58 (15)	20:44	21:11
16	07:58	07:25		07:37	06:41	07:24 (15)	05:57	05:40
	17:12	17:55		19:30	20:09	07:57 (15)	20:45	21:12
17	07:58	07:23		07:35	06:39	07:25 (15)	05:56	05:40
	17:13	17:56		19:32	20:10	07:55 (15)	20:46	21:12
18	07:57	07:22		07:33	06:37	07:27 (15)	05:55	05:40
	17:14	17:57		19:33	20:12	07:54 (15)	20:48	21:12
19	07:56	07:20		07:32	06:36	07:28 (15)	05:54	05:40
	17:16	17:59		19:34	20:13	07:52 (15)	20:49	21:13
20	07:56	07:19		07:30	06:34	07:30 (15)	05:53	05:40
	17:17	18:00		19:36	20:14	07:49 (15)	20:50	21:13
21	07:55	07:17		07:28	06:32	07:33 (15)	05:52	05:40
	17:18	18:00		19:37	20:15	07:46 (15)	20:51	21:13
22	07:54	07:15		07:26	06:31		05:51	05:40
	17:20	18:01		19:38	20:17		20:52	21:13
23	07:53	07:14		07:24	06:29		05:50	05:41
	17:21	18:03		19:39	20:18		20:53	21:14
24	07:53	07:12		07:22	06:27		05:49	05:41
	17:22	18:04		19:41	20:19		20:54	21:14
25	07:52	07:11		07:20	06:26		05:49	05:41
	17:24	18:06		19:42	20:20		20:55	21:14
26	07:51	08:13 (18)	07:09	07:19	07:41 (15)	06:24	05:48	05:41
	17:25	1 08:14 (18)	18:07	19:43	13 07:54 (15)	20:21	20:56	21:14
27	07:50	08:12 (18)	07:07	07:17	07:37 (15)	06:23	05:47	05:42
	17:26	4 08:16 (18)	18:08	19:44	23 19:23 (12)	20:23	20:57	21:14
28	07:49	08:11 (18)	07:06	07:15	07:35 (15)	06:21	05:46	05:42
	17:28	9 17:02 (16)	18:10	19:46	31 19:24 (12)	20:24	20:58	21:14
29	07:48	08:10 (18)		07:13	07:33 (15)	06:20	05:46	05:43
	17:29	13 17:03 (16)		19:47	38 19:25 (12)	20:25	20:59	21:14
30	07:47	08:09 (18)		07:11	07:31 (15)	06:18	05:45	05:43
	17:31	17 17:05 (16)		19:48	43 19:26 (12)	20:26	21:00	21:14
31	07:46	08:08 (18)		07:09	07:29 (15)		05:44	
	17:32	20 17:06 (16)		19:49	48 19:27 (12)		21:01	
Potential sun hours	287	292	369	403	458	465		
Total, worst case	64	262	196	870				
Sun reduction	0.57	0.59	0.59	0.61				
Oper. time red.	0.98	0.98	0.98	0.98				
Wind dir. red.	0.63	0.63	0.59	0.59				
Total reduction	0.35	0.36	0.34	0.35				
Total, real	23	95	67	306				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H343 - H343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:52	06:47 20:05	07:22 (15) 19:09	07:22 17:15	07:41 16:47
2	05:44 21:14	06:12 20:51	06:48 20:03	07:21 (15) 19:07	07:23 17:14	07:42 16:47
3	05:45 21:14	06:13 20:50	06:49 20:01	07:20 (15) 19:05	07:25 17:12	07:43 16:46
4	05:45 21:13	06:14 20:49	06:50 19:59	07:20 (15) 19:03	07:26 17:11	07:44 16:46
5	05:46 21:13	06:16 20:47	06:52 19:57	07:19 (15) 19:02	07:27 17:10	07:45 16:46
6	05:47 21:13	06:17 20:46	06:53 19:56	07:19 (15) 19:00	07:28 17:09	07:46 16:46
7	05:47 21:13	06:18 20:45	06:54 19:54	07:19 (15) 19:00	07:29 17:07	07:47 16:45
8	05:48 21:12	06:19 20:43	06:55 19:52	07:20 (15) 18:54	07:31 17:06	07:48 16:45
9	05:49 21:12	06:20 20:42	06:56 19:50	07:20 (15) 18:53	07:32 17:05	07:49 16:45
10	05:50 21:11	06:21 20:41	06:57 19:48	07:20 (15) 18:51	07:33 17:04	07:50 16:45
11	05:50 21:11	06:22 20:39	06:59 19:46	07:20 (15) 18:49	07:34 17:03	07:51 16:45
12	05:51 21:10	06:24 20:38	07:00 19:45	07:21 (15) 18:47	07:36 17:01	07:52 16:45
13	05:52 21:10	06:25 20:36	07:01 19:43	07:22 (15) 18:45	07:37 17:00	07:53 16:45
14	05:53 21:09	06:26 20:35	07:02 19:41	07:23 (15) 18:44	07:38 16:59	07:54 16:46
15	05:54 21:08	06:27 20:33	07:03 19:39	07:24 (15) 18:42	07:39 16:58	07:54 16:46
16	05:55 21:08	06:28 20:32	07:04 19:37	07:26 (15) 18:40	07:41 16:57	07:55 16:46
17	05:56 21:07	06:29 20:30	07:06 19:35	07:29 (15) 18:39	07:42 16:56	07:56 16:46
18	05:57 21:06	06:31 20:28	07:07 19:33	07:43 18:37	07:25 16:55	07:56 16:47
19	05:57 21:06	06:32 20:27	07:08 19:31	07:45 18:35	07:26 16:55	07:57 16:47
20	05:58 21:05	06:33 20:25	07:09 19:30	07:46 18:34	07:27 16:54	07:58 16:47
21	05:59 21:04	06:34 20:24	07:10 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	06:00 21:03	06:35 20:22	07:11 19:26	07:48 18:30	07:30 16:52	07:59 16:48
23	06:01 21:02	06:36 20:20	07:13 19:24	07:50 18:29	07:31 16:51	07:59 16:49
24	06:02 21:01	06:38 20:19	07:14 19:22	07:51 18:27	07:32 16:51	08:00 16:49
25	06:03 21:00	06:39 20:17	07:15 19:20	07:52 18:26	07:33 16:50	08:00 16:50
26	06:05 20:59	06:40 20:15	07:16 19:18	07:54 18:24	07:35 16:49	08:00 16:51
27	06:06 20:58	06:41 20:13	07:17 19:16	07:55 18:23	07:36 16:49	08:01 16:51
28	06:07 20:57	06:42 20:12	07:19 19:15	07:56 18:21	07:37 16:48	08:01 16:52
29	06:08 20:56	06:43 20:10	07:20 19:13	07:58 18:20	07:38 16:48	08:01 16:53
30	06:09 20:55	06:45 20:08	07:21 19:11	07:59 18:18	07:40 16:47	08:02 16:54
31	06:10 20:54	06:46 20:06	07:23 (15) 08:01 (15)	08:00 18:17	08:37 (18) 08:42 (18)	08:02 16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case		293	788	5	330	
Sun reduction		0.74	0.69	0.63	0.50	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.59	0.59	0.67	0.63	
Total reduction		0.42	0.40	0.42	0.31	
Total, real		124	314	2	102	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H345 - H345

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44	06:11	06:47	19:20 (10)	07:22	07:02
	21:14	20:53	20:05	14 19:34 (10)	19:09	17:15 38
2	05:44	06:12	06:48	19:25 (10)	07:23	07:03
	21:14	20:51	20:03	3 19:28 (10)	19:07	17:14 39
3	05:45	06:13	06:49		07:25	07:05
	21:14	20:50	20:01		19:05	17:13 39
4	05:46	06:14	06:50		07:26	07:06
	21:14	20:49	19:59		19:03	17:11 39
5	05:46	06:16	06:52	07:19 (13)	07:27	07:07
	21:13	20:48	19:58	10 07:29 (13)	19:02	17:10 39
6	05:47	06:17	06:53	07:17 (13)	07:28	07:09
	21:13	20:46	19:56	14 07:31 (13)	19:00	17:09 40
7	05:48	06:18	06:54	07:15 (13)	07:30	07:10
	21:13	20:45	19:54	16 07:31 (13)	18:56	17:07 39
8	05:48	06:19	06:55	07:17 (13)	07:31	07:11
	21:12	20:43	19:52	16 07:33 (13)	18:54	17:06 39
9	05:49	20:28 (7)	06:20	19:30 (10)	06:56	07:18 (13)
	21:12	4 20:32 (7)	20:42	5 19:35 (10)	19:50	15 07:33 (13)
10	05:50	20:27 (7)	06:21	19:26 (10)	06:57	07:19 (13)
	21:11	7 20:34 (7)	20:41	13 19:39 (10)	19:48	23 19:05 (9)
11	05:50	20:26 (7)	06:22	19:23 (10)	06:59	07:20 (13)
	21:11	9 20:35 (7)	20:39	18 19:41 (10)	19:47	26 19:07 (9)
12	05:51	20:25 (7)	06:24	19:21 (10)	07:00	07:21 (13)
	21:10	10 20:35 (7)	20:38	21 19:42 (10)	19:45	28 19:08 (9)
13	05:52	20:24 (7)	06:25	19:21 (10)	07:01	07:22 (13)
	21:10	12 20:36 (7)	20:36	23 19:44 (10)	19:43	28 19:09 (9)
14	05:53	20:24 (7)	06:26	19:19 (10)	07:02	07:23 (13)
	21:09	13 20:37 (7)	20:35	26 19:45 (10)	19:41	28 19:09 (9)
15	05:54	20:24 (7)	06:27	19:18 (10)	07:03	07:25 (13)
	21:09	14 20:38 (7)	20:33	27 19:45 (10)	19:39	26 19:10 (9)
16	05:55	20:23 (7)	06:28	19:17 (10)	07:04	07:26 (13)
	21:08	16 20:39 (7)	20:32	29 19:46 (10)	19:37	23 19:10 (9)
17	05:56	20:23 (7)	06:29	19:16 (10)	07:06	18:47 (9)
	21:07	16 20:39 (7)	20:30	30 19:46 (10)	19:35	22 19:09 (9)
18	05:57	20:23 (7)	06:31	19:15 (10)	07:07	18:47 (9)
	21:06	17 20:40 (7)	20:29	31 19:46 (10)	19:33	22 19:09 (9)
19	05:58	20:23 (7)	06:32	19:14 (10)	07:08	18:47 (9)
	21:06	16 20:39 (7)	20:27	32 19:46 (10)	19:32	20 19:07 (9)
20	05:58	20:22 (7)	06:33	19:14 (10)	07:09	18:47 (9)
	21:05	16 20:38 (7)	20:25	32 19:46 (10)	19:30	18 19:05 (9)
21	05:59	20:22 (7)	06:34	19:13 (10)	07:10	18:47 (9)
	21:04	15 20:37 (7)	20:24	33 19:46 (10)	19:28	16 19:03 (9)
22	06:00	20:22 (7)	06:35	19:14 (10)	07:11	18:49 (9)
	21:03	14 20:36 (7)	20:22	33 19:47 (10)	19:26	12 18:51 (9)
23	06:01	20:23 (7)	06:36	19:14 (10)	07:13	18:51 (9)
	21:02	12 20:35 (7)	20:20	32 19:46 (10)	19:24	8 18:59 (9)
24	06:02	20:23 (7)	06:38	19:13 (10)	07:14	
	21:01	11 20:34 (7)	20:19	33 19:46 (10)	19:22	
25	06:04	20:23 (7)	06:39	19:13 (10)	07:15	
	21:00	10 20:33 (7)	20:17	32 19:45 (10)	19:20	
26	06:05	20:23 (7)	06:40	19:14 (10)	07:16	
	20:59	10 20:33 (7)	20:15	30 19:44 (10)	19:18	
27	06:06	20:24 (7)	06:41	19:14 (10)	07:17	
	20:58	8 20:32 (7)	20:14	29 19:43 (10)	19:16	
28	06:07	20:25 (7)	06:42	19:14 (10)	07:19	
	20:57	5 20:30 (7)	20:12	27 19:41 (10)	19:15	
29	06:08	20:26 (7)	06:43	19:15 (10)	07:20	
	20:56	3 20:29 (7)	20:10	25 19:40 (10)	19:13	
30	06:09	20:27 (7)	06:45	19:17 (10)	07:21	
	20:55	1 20:28 (7)	20:08	22 19:39 (10)	19:11	
31	06:10		06:46	19:18 (10)		
	20:54		20:07	19 19:37 (10)		
Potential sun hours	471	435	377	341	289	276
Total, worst case	239	602	388	271	705	
Sun reduction	0.76	0.74	0.69	0.63	0.50	
Oper. time red.	0.98	0.98	0.98	0.98	0.98	
Wind dir. red.	0.66	0.62	0.59	0.68	0.68	
Total reduction	0.49	0.45	0.40	0.42	0.33	
Total, real	118	270	154	114	236	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H346 - H346

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:33	07:04 18:11	07:25 (13) 17:36 (10)	07:08 19:51	06:17 20:28
2	08:02 16:56	07:44 17:35	07:02 18:12	07:23 (13) 17:36 (10)	07:06 19:52	6 20:29
3	08:02 16:57	07:42 17:36	07:00 18:14	07:21 (13) 17:36 (10)	07:04 19:53	8 20:30
4	08:02 16:58	07:41 17:38	06:59 18:15	07:19 (13) 17:35 (10)	07:02 19:54	10 20:31
5	08:02 16:59	07:40 17:39	06:57 18:16	07:17 (13) 17:35 (10)	07:00 19:56	12 20:33
6	08:02 17:00	07:39 17:41	06:55 18:18	07:16 (13) 17:35 (10)	06:58 19:57	14 20:34
7	08:02 17:01	07:37 17:42	06:53 18:19	07:14 (13) 17:34 (10)	06:57 19:58	15 20:35
8	08:01 17:03	07:36 17:43	07:52 18:20	08:12 (13) 18:33 (10)	06:55 19:59	16 20:36
9	08:01 17:04	07:35 17:45	07:50 19:22	08:13 (13) 18:32 (10)	06:53 20:01	18 20:37
10	08:01 17:05	07:34 17:46	07:48 19:23	08:14 (13) 18:30 (10)	06:51 20:02	19 20:39
11	08:01 17:06	07:32 17:48	07:46 19:24	18:05 (10) 18:29 (10)	06:50 20:03	20 20:40
12	08:00 17:07	07:31 17:49	07:44 19:25	18:07 (10) 18:27 (10)	06:48 20:04	20 20:41
13	08:00 17:08	07:29 17:50	07:43 19:27	18:09 (10) 18:24 (10)	06:46 20:06	20 20:42
14	07:59 17:09	07:28 17:52	17:19 (9) 17:27 (9)	07:41 19:28	06:44 20:07	18 20:43
15	07:59 17:11	07:26 17:53	17:17 (9) 17:29 (9)	07:39 19:29	06:43 20:08	17 20:44
16	07:58 17:12	07:25 17:55	17:15 (9) 17:30 (9)	07:37 19:31	06:41 20:09	15 20:45
17	07:58 17:13	07:23 17:56	17:13 (9) 17:32 (9)	07:35 19:32	06:39 20:10	4 20:46
18	07:57 17:14	07:22 17:57	17:13 (9) 17:33 (9)	07:33 19:33	06:37 20:12	8 20:47
19	07:56 17:16	07:20 17:59	17:12 (9) 17:34 (9)	07:32 19:34	06:36 20:13	10 20:48
20	07:56 17:17	07:19 18:00	17:12 (9) 17:34 (9)	07:30 19:36	06:34 20:14	13 20:49
21	07:55 17:18	07:17 18:00	17:11 (9) 17:34 (9)	07:28 19:37	06:32 20:15	15 20:50
22	07:54 17:20	07:16 18:01	17:09 (10) 17:34 (9)	07:26 19:38	06:31 20:17	17 20:51
23	07:54 17:21	07:14 18:03	17:08 (10) 17:34 (9)	07:24 19:39	06:29 20:18	19 20:52
24	07:53 17:22	07:12 18:04	17:06 (10) 17:33 (9)	07:22 19:41	06:27 20:19	20 20:53
25	07:52 17:24	07:11 18:06	17:05 (10) 17:33 (10)	07:20 19:42	06:26 20:20	19 20:54
26	07:51 17:25	07:09 18:07	17:04 (10) 17:35 (10)	07:19 19:43	06:24 20:22	18 20:55
27	07:50 17:27	07:07 18:08	17:03 (10) 17:35 (10)	07:17 19:44	06:23 20:23	16 20:56
28	07:49 17:28	07:06 18:10	07:26 (13) 17:35 (10)	07:15 19:46	06:21 20:24	15 20:57
29	07:48 17:29			07:13 19:47	06:20 20:25	12 20:58
30	07:47 17:31			07:11 19:48	06:18 20:26	8 20:59
31	07:46 17:32			07:09 19:49		6 21:00
Potential sun hours	287	292	369	403	458	465
Total, worst case		344	493	197	252	
Sun reduction		0.59	0.59	0.61	0.65	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.55	0.56	0.62	0.55	
Total reduction		0.32	0.32	0.37	0.35	
Total, real		109	160	73	88	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H346 - H346

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December						
1	05:44	06:11	06:34 (11)	06:47	07:22	17:46 (10)	07:02	07:41				
	21:14	20:53	21 06:55 (11)	20:05	19:09	19 18:05 (10)	17:15	16:47				
2	05:44	06:12	06:36 (11)	06:48	07:23	17:44 (10)	07:03	07:42				
	21:14	20:51	20 06:56 (11)	20:03	19:07	22 18:06 (10)	17:14	16:47				
3	05:45	06:13	06:37 (11)	06:49	07:25	07:55 (13)	07:05	07:43				
	21:14	20:50	19 06:56 (11)	20:01	19:05	31 18:08 (10)	17:13	16:46				
4	05:46	06:14	06:38 (11)	06:50	07:26	07:51 (13)	07:06	07:44				
	21:14	20:49	18 06:56 (11)	19:59	19:04	39 18:09 (10)	17:11	16:46				
5	05:46	06:16	06:39 (11)	06:52	07:27	07:49 (13)	07:07	07:45				
	21:13	20:48	17 06:56 (11)	19:58	19:02	44 18:09 (10)	17:10	16:46				
6	05:47	06:17	06:40 (11)	06:53	07:28	07:49 (13)	07:09	07:46				
	21:13	20:46	16 06:56 (11)	19:56	19:00	47 18:10 (10)	17:09	16:46				
7	05:47	06:18	06:41 (11)	06:54	07:30	07:51 (13)	07:10	07:47				
	21:13	20:45	15 06:56 (11)	19:54	18:56	47 18:11 (10)	17:07	16:45				
8	05:48	06:19	06:42 (11)	06:55	07:31	07:52 (13)	07:11	07:48				
	21:12	20:44	13 06:55 (11)	19:52	18:54	46 18:10 (10)	17:06	16:45				
9	05:49	06:20	06:43 (11)	06:56	07:32	07:53 (13)	07:13	07:49				
	21:12	20:42	12 06:55 (11)	19:50	18:53	45 18:10 (10)	17:05	16:45				
10	05:50	06:21	06:44 (11)	06:57	07:33	07:54 (13)	07:14	07:50				
	21:11	20:41	10 06:54 (11)	19:48	18:51	45 18:10 (10)	17:04	16:45				
11	05:50	06:22	06:45 (11)	06:59	07:35	07:56 (13)	07:15	07:51				
	21:11	20:39	8 06:53 (11)	19:47	18:49	43 18:10 (10)	17:03	16:45				
12	05:51	06:24	06:46 (11)	07:00	07:36	07:57 (13)	07:17	07:52				
	21:10	20:38	5 06:51 (11)	19:45	18:47	39 18:09 (10)	17:01	16:45				
13	05:52	06:25	06:48 (11)	07:01	07:37	07:58 (13)	07:18	07:53				
	21:10	20:36	3 06:51 (11)	19:43	18:46	35 18:08 (10)	17:00	16:45				
14	05:53	06:26	19:47 (7)	07:02	07:38	17:36 (10)	07:19	07:54				
	21:09	20:35	9 19:56 (7)	19:41	18:44	32 18:08 (10)	16:59	16:46				
15	05:54	06:27	19:45 (7)	07:03	07:40	17:36 (10)	07:21	07:54				
	21:09	20:33	13 19:58 (7)	19:39	18:42	31 18:07 (10)	16:58	16:46				
16	05:55	06:28	19:44 (7)	07:04	07:41	17:36 (10)	07:22	07:55				
	21:08	20:32	15 19:59 (7)	19:37	18:40	30 18:06 (10)	16:57	16:46				
17	05:56	06:29	19:42 (7)	07:06	07:42	17:37 (10)	07:23	07:56				
	21:07	20:30	17 19:59 (7)	19:35	18:39	28 18:05 (9)	16:56	16:46	2		08:58 (12)	
18	05:57	06:31	19:41 (7)	07:07	07:43	17:38 (10)	07:25	07:57				
	21:06	20:29	18 19:59 (7)	19:33	18:37	27 18:05 (9)	16:55	16:47	4		09:02 (12)	
19	05:58	06:32	19:41 (7)	07:08	07:45	17:39 (10)	07:26	07:57				
	21:06	20:27	19 20:00 (7)	19:32	18:35	26 18:05 (9)	16:55	16:47	6		09:04 (12)	
20	05:58	06:33	19:40 (7)	07:09	07:46	17:41 (10)	07:27	07:58				
	21:05	20:25	19 19:59 (7)	19:30	18:34	24 18:05 (9)	16:54	16:47	6		09:04 (12)	
21	05:59	06:34	19:40 (7)	07:10	07:47	17:42 (9)	07:29	07:58				
	21:04	20:24	18 19:58 (7)	19:28	18:32	23 18:05 (9)	16:53	16:48	7		09:05 (12)	
22	06:00	06:35	19:41 (7)	07:11	07:49	17:41 (9)	07:30	07:59				
	21:03	20:22	16 19:57 (7)	19:26	18:30	23 18:04 (9)	16:52	16:48	7		09:05 (12)	
23	06:01	06:36	19:41 (7)	07:13	07:50	17:42 (9)	07:31	07:59				
	21:02	20:20	15 19:56 (7)	19:24	18:29	22 18:04 (9)	16:51	16:49	6		09:06 (12)	
24	06:02	06:38	19:41 (7)	07:14	07:51	17:42 (9)	07:32	08:00				
	21:01	20:19	13 19:54 (7)	19:22	18:27	21 18:03 (9)	16:51	16:49	6		09:06 (12)	
25	06:04	06:39	19:42 (7)	07:15	07:53	17:44 (9)	07:34	08:00				
	21:00	20:17	10 19:52 (7)	19:20	18:26	18 18:02 (9)	16:50	16:50	5		09:06 (12)	
26	06:05	06:42 (11)	06:40	19:43 (7)	07:16	07:54	17:45 (9)	07:35	08:01			
	20:59	6 06:48 (11)	20:15	7 19:50 (7)	19:18	18:24	15 18:00 (9)	16:49	16:51	3		09:06 (12)
27	06:06	06:39 (11)	06:41	19:45 (7)	07:17	07:55	17:46 (9)	07:36	08:01			
	20:58	11 06:50 (11)	20:14	4 19:49 (7)	19:17	18:23	12 17:58 (9)	16:49	16:51			
28	06:07	06:38 (11)	06:42	07:19	07:56	17:49 (9)	07:37	08:01				
	20:57	14 06:52 (11)	20:12	19:15	18:21	7 17:56 (9)	16:48	16:52				
29	06:08	06:37 (11)	06:43	07:20	07:58	17:51 (9)	07:39	08:01				
	20:56	16 06:53 (11)	20:10	19:13	18:20	16:48	16:53	08:01				
30	06:09	06:36 (11)	06:45	07:21	17:50 (10)	07:59	07:40	08:02				
	20:55	18 06:54 (11)	20:08	19:11	13 18:03 (10)	18:18	16:47	16:54				
31	06:10	06:35 (11)	06:46	07:22	18:01	08:01	08:02	08:02				
	20:54	19 06:54 (11)	20:07	07:23	18:17	16:54	16:54	16:54				
Potential sun hours	471	435	377	341	289	276						
Total, worst case	84	370	13	841		52						
Sun reduction	0.76	0.74	0.69	0.63		0.49						
Oper. time red.	0.98	0.98	0.98	0.98		0.98						
Wind dir. red.	0.55	0.59	0.55	0.56		0.70						
Total reduction	0.41	0.43	0.37	0.34		0.34						
Total, real	34	157	5	289		17						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H347 - H347

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:33	07:04 18:11	07:08 19:51	06:17 20:28	19:25 (9) 21:02
2	08:02 16:57	07:44 17:35	07:02 18:12	07:06 19:52	06:15 20:29	19:42 (9) 21:03
3	08:02 16:57	07:42 17:36	07:00 18:14	07:04 19:53	06:14 20:30	19:39 (9) 21:03
4	08:02 16:58	07:41 17:38	06:59 18:15	07:02 19:54	06:12 20:31	19:29 (9) 21:04
5	08:02 16:59	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:33	05:42 21:05
6	08:02 17:00	07:39 17:41	06:55 18:18	06:58 19:57	06:10 20:34	05:43 21:06
7	08:02 17:01	07:37 17:42	06:53 18:19	06:57 19:58	06:08 20:35	05:41 21:06
8	08:01 17:03	07:36 17:43	06:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07
9	08:01 17:04	07:35 17:45	06:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08
10	08:01 17:05	07:34 17:46	06:48 19:23	06:51 20:02	06:04 20:39	05:40 21:08
11	08:01 17:06	07:32 17:48	06:46 19:24	06:50 20:03	07:10 (13) 07:11 (13)	06:03 20:40
12	08:00 17:07	07:31 17:49	06:44 19:25	06:48 20:04	07:08 (13) 07:11 (13)	06:02 20:41
13	08:00 17:08	07:29 17:50	06:43 19:27	06:46 20:06	07:06 (13) 19:41 (9)	06:01 20:42
14	07:59 17:09	07:28 17:52	06:41 19:28	06:44 20:07	07:04 (13) 19:43 (9)	06:00 20:43
15	07:59 17:11	07:26 17:53	06:39 19:29	06:43 20:08	07:03 (13) 19:46 (9)	05:58 20:44
16	07:58 17:12	07:25 17:55	06:37 19:31	06:41 20:09	07:01 (13) 19:47 (9)	05:57 20:45
17	07:58 17:13	07:23 17:56	06:35 19:32	06:39 20:10	06:59 (13) 19:47 (9)	05:56 20:47
18	07:57 17:14	07:22 17:57	06:33 19:33	06:37 20:12	06:58 (13) 19:48 (9)	05:55 20:48
19	07:56 17:16	07:20 17:59	06:32 19:34	06:36 20:13	06:57 (13) 19:48 (9)	05:54 20:49
20	07:56 17:17	07:19 18:00	06:30 19:36	06:34 20:14	06:59 (13) 19:48 (9)	05:53 20:50
21	07:55 17:18	07:17 18:00	06:28 19:37	06:32 20:15	19:21 (9) 19:49 (9)	05:52 20:51
22	07:54 17:20	07:16 18:02	06:26 19:38	06:31 20:17	19:20 (9) 19:48 (9)	05:51 20:52
23	07:53 17:21	07:14 18:03	06:24 19:39	06:29 20:18	19:20 (9) 19:49 (9)	05:50 20:53
24	07:53 17:22	07:12 18:04	06:22 19:41	06:27 20:19	19:20 (9) 19:48 (9)	05:50 20:54
25	07:52 17:24	07:11 18:06	06:21 19:42	06:26 20:20	19:21 (9) 19:48 (9)	05:49 20:55
26	07:51 17:25	07:09 18:07	06:19 19:43	06:24 20:22	19:20 (9) 19:47 (9)	05:48 20:56
27	07:50 17:27	07:07 18:08	06:17 19:44	06:23 20:23	19:21 (9) 19:47 (9)	05:47 20:57
28	07:49 17:28	07:06 18:10	06:15 19:46	06:21 20:24	19:21 (9) 19:45 (9)	05:46 20:58
29	07:48 17:29		06:13 19:47	06:20 20:25	19:23 (9) 19:45 (9)	05:46 20:59
30	07:47 17:31		06:11 19:48	06:18 20:26	19:23 (9) 19:43 (9)	05:45 21:00
31	07:46 17:32		06:09 19:49		05:44 21:01	
Potential sun hours	287	292	369	403	458	465
Total, worst case			434	494	37	
Sun reduction			0.59	0.61	0.65	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.62	0.61	0.62	
Total reduction			0.36	0.36	0.39	
Total, real			155	180	15	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H347 - H347

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:53	06:47 20:05	07:09 (13) 07:10 (13)	07:22 19:09	07:43 (12) 17:15
2	05:44 21:14	06:12 20:51	06:48 20:03	07:23 19:07	27 08:10 (12) 07:44 (12)	17:03 16:47
3	05:45 21:14	06:13 20:50	06:49 20:01	07:25 19:05	25 08:09 (12) 07:46 (12)	17:14 16:46
4	05:46 21:14	06:14 20:49	06:50 19:59	07:26 19:04	23 08:09 (12) 07:47 (12)	17:13 16:46
5	05:46 21:13	06:16 20:48	06:52 19:58	07:27 19:02	21 08:08 (12) 07:48 (12)	17:11 16:46
6	05:47 21:13	06:17 20:46	06:53 19:56	07:28 19:00	18 08:06 (12) 07:49 (12)	17:10 16:46
7	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	15 08:04 (12) 07:51 (12)	17:09 16:45
8	05:48 21:12	06:19 20:44	06:55 19:52	07:31 18:54	12 08:03 (12) 07:52 (12)	17:07 16:45
9	05:49 21:12	06:20 20:42	06:56 19:50	07:32 18:53	7 07:59 (12) 07:32	17:06 16:45
10	05:50 21:11	06:21 20:41	19:37 (9) 19:46 (9)	06:57 19:48	07:33 18:51	17:05 16:45
11	05:51 21:11	06:22 20:39	19:34 (9) 19:48 (9)	06:59 19:47	07:35 18:49	17:04 16:45
12	05:51 21:10	06:24 20:38	19:32 (9) 19:50 (9)	07:00 19:45	07:36 18:47	17:03 16:45
13	05:52 21:10	06:25 20:36	19:31 (9) 19:52 (9)	07:01 19:43	07:37 18:46	17:02 16:45
14	05:53 21:09	06:26 20:35	19:30 (9) 19:53 (9)	07:02 19:41	07:38 18:44	17:01 16:46
15	05:54 21:09	06:27 20:33	19:29 (9) 19:53 (9)	07:03 19:39	07:40 18:42	17:01 16:46
16	05:55 21:08	06:28 20:32	19:28 (9) 19:54 (9)	07:04 19:37	07:41 18:40	17:02 16:46
17	05:56 21:07	06:29 20:30	19:27 (9) 19:54 (9)	07:06 19:35	07:42 18:39	17:03 16:46
18	05:57 21:06	06:31 20:29	19:26 (9) 19:54 (9)	07:07 19:33	07:43 18:37	17:05 16:47
19	05:58 21:06	06:32 20:27	19:26 (9) 19:54 (9)	07:08 19:32	7 07:56 (12) 08:03 (12)	17:06 16:55
20	05:59 21:05	06:33 20:25	19:25 (9) 19:53 (9)	07:09 19:30	07:52 (12) 08:06 (12)	17:07 16:54
21	05:59 21:04	06:34 20:24	19:26 (9) 19:54 (9)	07:10 19:28	14 07:49 (12) 08:08 (12)	17:08 16:53
22	06:00 21:03	06:35 20:22	19:26 (9) 19:54 (9)	07:11 19:26	19 07:48 (12) 08:10 (12)	17:09 16:52
23	06:01 21:02	06:36 20:20	07:03 (13) 19:53 (9)	07:13 19:24	22 07:46 (12) 08:11 (12)	17:10 16:49
24	06:03 21:01	06:38 20:19	07:00 (13) 19:52 (9)	07:14 19:22	25 07:44 (12) 08:12 (12)	17:11 16:49
25	06:04 21:00	06:39 20:17	07:01 (13) 19:51 (9)	07:15 19:20	28 07:43 (12) 08:12 (12)	17:12 16:50
26	06:05 20:59	06:40 20:15	07:02 (13) 19:50 (9)	07:16 19:18	29 07:42 (12) 08:12 (12)	17:13 16:51
27	06:06 20:58	06:41 20:14	07:03 (13) 19:48 (9)	07:17 19:17	30 07:41 (12) 08:12 (12)	17:14 16:51
28	06:07 20:57	06:42 20:12	07:04 (13) 19:46 (9)	07:19 19:15	31 07:42 (12) 08:12 (12)	17:15 16:52
29	06:08 20:56	06:43 20:10	07:05 (13) 19:44 (9)	07:20 19:13	07:41 (12) 08:12 (12)	17:16 16:53
30	06:09 20:55	06:45 20:08	07:07 (13) 19:42 (9)	07:21 19:11	29 07:42 (12) 08:11 (12)	17:17 16:54
31	06:10 20:54	06:46 20:07	07:08 (13) 07:11 (13)		08:01 18:17	17:18 16:54
Potential sun hours	471	435	377	341	289	276
Total, worst case		537	296	148		
Sun reduction		0.74	0.69	0.63		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.61	0.62	0.62		
Total reduction		0.44	0.42	0.38		
Total, real		237	123	56		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H348 - H348

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December								
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	20:34 (4)	06:11	06:35 (9)	06:47	07:22	07:02	07:41						
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	12	20:46 (4)	20:53	13	06:48 (9)	20:05	19:09	17:15	16:47				
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	20:35 (4)	06:12	06:36 (9)	06:48	07:24	07:03	07:42						
	16:57	17:35	18:12	19:52	20:29	21:03	21:14	12	20:47 (4)	20:51	12	06:48 (9)	20:03	19:07	17:14	16:47				
3	08:02	07:43	07:01	07:04	06:14	05:43	20:34 (4)	05:45	20:35 (4)	06:13	06:37 (9)	06:49	07:25	07:05	07:43					
	16:58	17:36	18:14	19:53	20:30	21:03	3	20:37 (4)	21:14	11	20:46 (4)	20:50	10	06:47 (9)	20:01	19:05	17:13	16:46		
4	08:02	07:41	06:59	07:02	06:13	05:42	20:33 (4)	05:46	20:36 (4)	06:15	06:38 (9)	06:51	07:26	07:06	07:44					
	16:59	17:38	18:15	19:54	20:31	21:04	5	20:38 (4)	21:14	10	20:46 (4)	20:49	9	06:47 (9)	20:00	19:04	17:11	16:46		
5	08:02	07:40	06:57	07:00	06:11	05:42	20:32 (4)	05:46	20:37 (4)	06:16	06:39 (9)	06:52	07:27	07:07	07:45					
	17:00	17:39	18:16	19:56	20:33	21:05	7	20:39 (4)	21:13	9	20:46 (4)	20:48	7	06:46 (9)	19:58	19:02	17:10	16:46		
6	08:02	07:39	06:55	06:59	06:10	06:31 (9)	05:42	20:31 (4)	05:47	20:37 (4)	06:17	06:40 (9)	06:53	07:28	07:09	07:46				
	17:01	17:41	18:18	19:57	20:34	3	06:34 (9)	21:06	8	20:39 (4)	21:13	8	20:45 (4)	20:46	5	06:45 (9)	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	06:30 (9)	05:41	20:31 (4)	05:48	20:38 (4)	06:18	06:41 (9)	06:54	07:30	07:10	07:47				
	17:02	17:42	18:19	19:58	20:35	5	06:35 (9)	21:07	9	20:40 (4)	21:13	7	20:45 (4)	20:45	2	06:43 (9)	19:54	18:56	17:07	16:46
8	08:02	07:36	07:52	06:55	06:07	06:29 (9)	05:41	20:31 (4)	05:48	20:40 (4)	06:19	06:40 (9)	06:55	07:31	07:11	07:48				
	17:03	17:43	18:20	19:59	20:36	8	06:37 (9)	21:07	10	20:41 (4)	21:12	5	20:45 (4)	20:44	19:52	18:55	17:06	16:45		
9	08:01	07:35	07:50	06:53	06:06	06:27 (9)	05:41	20:31 (4)	05:49	20:40 (4)	06:20	06:56	07:32	07:13	07:49					
	17:04	17:45	19:22	20:01	20:37	9	06:36 (9)	21:08	11	20:42 (4)	21:12	4	20:44 (4)	20:42	19:50	18:53	17:05	16:45		
10	08:01	07:34	07:48	06:51	06:05	06:26 (9)	05:40	20:30 (4)	05:50	20:43 (4)	06:21	06:58	07:33	07:14	07:50					
	17:05	17:46	19:23	20:02	20:39	11	06:37 (9)	21:09	11	20:41 (4)	21:12	1	20:44 (4)	20:41	19:48	18:51	17:04	16:45		
11	08:01	07:32	07:46	06:50	06:03	06:25 (9)	05:40	20:30 (4)	05:51	20:40 (4)	06:23	06:59	07:35	07:15	07:51					
	17:06	17:48	19:24	20:03	20:40	12	06:37 (9)	21:09	12	20:42 (4)	21:11	20:39	19:47	18:49	17:03	16:45				
12	08:00	07:31	07:45	06:48	06:02	06:24 (9)	05:40	20:30 (4)	05:51	20:40 (4)	06:24	06:56	07:30	07:11	07:47					
	17:07	17:49	19:26	20:04	20:41	13	06:37 (9)	21:10	13	20:43 (4)	21:10	20:38	19:45	18:47	17:02	16:45				
13	08:00	07:29	07:43	06:46	06:01	06:23 (9)	05:40	20:30 (4)	05:52	20:40 (4)	06:25	07:01	07:37	07:18	07:53					
	17:08	17:51	19:27	20:06	20:42	14	06:37 (9)	21:10	13	20:43 (4)	21:10	20:36	19:43	18:46	17:01	16:46				
14	07:59	07:28	07:41	06:44	06:00	06:22 (9)	05:40	20:30 (4)	05:53	20:40 (4)	06:26	07:02	07:38	07:20	07:54					
	17:10	17:52	19:28	20:07	20:43	15	06:37 (9)	21:11	14	20:44 (4)	21:09	20:35	19:41	18:44	16:59	16:46				
15	07:59	07:26	07:39	06:43	05:59	06:21 (9)	05:40	20:30 (4)	05:54	20:40 (4)	06:27	07:03	07:40	07:21	07:55					
	17:11	17:53	19:29	20:08	20:44	16	06:37 (9)	21:11	14	20:44 (4)	21:09	20:33	19:39	18:42	16:58	16:46				
16	07:58	07:25	07:37	06:41	05:57	06:20 (9)	05:40	20:30 (4)	05:55	20:40 (4)	06:28	07:05	07:41	07:22	07:55					
	17:12	17:55	19:31	20:09	20:46	16	06:36 (9)	21:12	15	20:45 (4)	21:08	20:32	19:37	18:40	16:57	16:46				
17	07:58	07:23	07:35	06:39	05:56	06:21 (9)	05:40	20:30 (4)	05:56	20:40 (4)	06:30	07:06	07:42	07:24	07:56					
	17:13	17:56	19:32	20:11	20:47	14	06:35 (9)	21:12	15	20:45 (4)	21:07	20:30	19:35	18:39	16:57	16:46				
18	07:57	07:22	07:34	06:37	05:55	06:23 (9)	05:40	20:30 (4)	05:57	20:40 (4)	06:31	07:07	07:43	07:25	07:57					
	17:15	17:57	19:33	20:12	20:48	12	06:35 (9)	21:13	15	20:45 (4)	21:07	20:29	19:34	18:37	16:56	16:47				
19	07:57	07:20	07:32	06:36	05:54	06:24 (9)	05:40	20:30 (4)	05:58	20:40 (4)	06:32	07:08	07:45	07:26	07:57					
	17:16	17:59	19:34	20:13	20:49	10	06:34 (9)	21:13	15	20:45 (4)	21:06	20:27	19:32	18:35	16:55	16:47				
20	07:56	07:19	07:30	06:34	05:53	06:25 (9)	05:40	20:30 (4)	05:59	20:40 (4)	06:33	07:09	07:46	07:27	07:58					
	17:17	18:00	19:36	20:14	20:50	8	06:33 (9)	21:13	16	20:46 (4)	21:05	20:25	19:30	18:34	16:54	16:48				
21	07:55	07:17	07:28	06:32	05:52	06:27 (9)	05:40	20:31 (4)	06:00	20:40 (4)	06:34	07:10	07:47	07:29	07:58					
	17:19	18:00	19:37	20:15	20:51	4	06:31 (9)	21:13	16	20:47 (4)	21:04	20:24	19:28	18:32	16:53	16:48				
22	07:54	07:16	07:26	06:31	05:51	05:41	05:41	20:31 (4)	06:01	20:40 (4)	06:35	07:12	07:49	07:30	07:59					
	17:20	18:02	19:38	20:17	20:52	21:14	16	20:47 (4)	21:03	20:22	20:22	19:26	18:31	16:52	16:48					
23	07:54	07:14	07:24	06:29	05:50	05:41	05:41	20:31 (4)	06:02	06:35 (9)	06:37	07:13	07:50	07:31	07:59					
	17:21	18:03	19:40	20:18	20:53	21:14	16	20:47 (4)	21:02	7	06:42 (9)	20:20	19:24	18:29	16:52	16:49				
24	07:53	07:12	07:22	06:28	05:50	05:41	05:41	20:31 (4)	06:03	06:34 (9)	06:38	07:14	07:51	07:33	08:00					
	17:23	18:04	19:41	20:19	20:54	21:14	15	20:46 (4)	21:01	9	06:43 (9)	20:19	19:22	18:27	16:51	16:50				
25	07:52	07:11	07:21	06:26	05:49	05:41	05:41	20:32 (4)	06:04	06:33 (9)	06:39	07:15	07:53	07:34	08:00					
	17:24	18:06	19:42	20:20	20:55	21:14	15	20:47 (4)	21:00	11	06:44 (9)	20:17	19:20	18:26	16:50	16:50				
26	07:51	07:09	07:19	06:24	05:48	05:42	05:42	20:32 (4)	06:05	06:32 (9)	06:40	07:16	07:54	07:35	08:01					
	17:25	18:07	19:43	20:22	20:56	21:14	15	20:47 (4)	20:59	13	06:45 (9)	20:15	19:18	18:24	16:50	16:51				
27	07:50	07:07	07:17	06:23	05:47	05:42	05:42	20:32 (4)	06:06	06:31 (9)	06:41	07:18	07:55	07:36	08:01					
	17:27	18:08	19:45	20:23	20:57	21:14	15	20:47 (4)	20:58	15	06:46 (9)	20:14	19:17	18:23	16:49	16:51				
28	07:49	07:06	07:15	06:21	05:47	05:43	05:43	20:33 (4)	06:07	06:31 (9)	06:42	07:19	07:57	07:37	08:01					
	17:28	18:10	19:46	20:24	20:58	21:14	14	20:47 (4)	20:57	16	06:47 (9)	20:12	19:15	18:21	16:49	16:52				
29	07:48	07:13	07:20	06:20	05:46	05:43	05:43	20:33 (4)	06:08	06:31 (9)	06:44	07:20	07:58	07:39	08:02					
	17:29	18:11	19:47	20:25	20:59	21:14	14	20:47 (4)	20:56	16	06:47 (9)	20:10	19:13	18:20	16:48	16:53				
30	07:47	07:11	07:18	06:18	05:45	05:43	05:43	20:34 (4)	06:09	06:33 (9)	06:45	07:21	07:59	07:40	08:02					
	17:31	18:13	19:48	20:27	21:00	21:14	13	20:47 (4)	20:55	15	06:48 (9)	20:08	19:11	18:18	16:48	16:54				
31	07:46	07:10	07:17	06:17	05:45	05:45	05:45	20:34 (4)	06:10	06:34 (9)	06:46	07:22	08:01	08:02	08:04	16:55				
	17:32	18:14	19:49	20:28	21:01	21:14	14	20:48 (9)	20:07	06:48 (9)	20:07	18:17	18:17	16:48	16:55	16:55				
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276								
Total, worst case					170	355	195	58												
Sun reduction					0.65	0.70	0.76	0.74												
Oper. time red.					0.98	0.98	0.98	0.98												
Wind dir. red.					0.55	0.68	0.61	0.55												
Total reduction					0.35	0.47	0.45	0.40												
Total, real					60	166	88	23												

Table layout: For each day in each month the following matrix apply

Day in month

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H349 - H349

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N, NNE, ENE, E, ESE, SSE, S, SSW, WSW, W, WNW, NNW, Sum) and 2 rows of operational time values.

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (January-December) and rows for time slots (08:00-17:32) and summary statistics (Potential sun hours, Total, worst case, etc.).

Table layout: For each day in each month the following matrix apply

Matrix with 4 columns: Day in month, Sun rise/set, Minutes with flicker, and First/Last time with flicker (WTG causing flicker).

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H350 - H350

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	08:13 (6)	07:04	07:30 (7)	07:08	06:17	05:44	05:44	06:11	06:47	07:22
	16:56	17:34	08:45 (6)	18:11	07:44 (7)	19:51	20:28	21:02	21:14	20:53	20:05	19:09
2	08:02	07:44	08:14 (6)	07:02	07:31 (7)	07:06	06:15	05:43	05:44	06:12	06:48	07:24
	16:57	17:35	08:45 (6)	18:12	07:42 (7)	19:52	20:29	21:03	21:14	20:52	20:03	19:07
3	08:02	07:43	08:14 (6)	07:01	07:04	07:04	06:14	05:43	05:45	06:13	06:49	07:25
	16:58	17:36	08:44 (6)	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	19:05
4	08:02	07:41	08:15 (6)	06:59	07:02	06:12	05:42	05:46	06:15	06:51	07:26	07:06
	16:58	17:38	08:43 (6)	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	19:04
5	08:02	07:40	08:16 (6)	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07
	16:59	17:39	08:43 (6)	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	19:02
6	08:02	07:39	08:16 (6)	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09
	17:00	17:41	08:42 (6)	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	19:00
7	08:02	07:38	08:17 (6)	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10
	17:02	17:42	08:41 (6)	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	19:00
8	08:02	07:36	08:19 (6)	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11
	17:03	17:43	08:40 (6)	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	19:00
9	08:01	07:35	08:20 (6)	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13
	17:04	17:45	08:38 (6)	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	19:00
10	08:01	07:34	08:23 (6)	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14
	17:05	17:46	08:36 (6)	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	19:00
11	08:01	07:32	08:28 (6)	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16
	17:06	17:48	08:32 (6)	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	19:00
12	08:00	07:31	07:45	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17
	17:07	17:49	19:26	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	19:00
13	08:00	08:23 (6)	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18
	17:08	08:26 (6)	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	19:00
14	07:59	08:23 (6)	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19
	17:10	08:29 (6)	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	19:00
15	07:59	08:22 (6)	07:27	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21
	17:11	08:31 (6)	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	19:00
16	07:58	08:22 (6)	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22
	17:12	08:34 (6)	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	19:00
17	07:58	08:21 (6)	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24
	17:13	08:35 (6)	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	19:00
18	07:57	08:20 (6)	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25
	17:15	08:36 (6)	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	19:00
19	07:57	08:20 (6)	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26
	17:16	08:38 (6)	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	19:00
20	07:56	08:19 (6)	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27
	17:17	08:39 (6)	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	19:00
21	07:55	08:18 (6)	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:29
	17:18	08:39 (6)	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	19:00
22	07:54	08:17 (6)	07:16	07:26	06:31	05:51	05:40	06:01	06:35	07:12	07:49	07:30
	17:20	08:40 (6)	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	19:00
23	07:54	08:16 (6)	07:14	07:24	06:29	05:50	05:41	06:02	06:37	07:13	07:50	07:31
	17:21	08:41 (6)	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	19:00
24	07:53	08:15 (6)	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33
	17:23	08:41 (6)	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	19:00
25	07:52	08:14 (6)	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34
	17:24	08:42 (6)	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	19:00
26	07:51	08:13 (6)	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35
	17:25	08:43 (6)	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	19:00
27	07:50	08:12 (6)	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36
	17:27	08:43 (6)	18:08	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	19:00
28	07:49	08:12 (6)	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38
	17:28	08:43 (6)	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	19:00
29	07:48	08:12 (6)	07:05	07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39
	17:29	08:44 (6)	19:47	19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	19:00
30	07:47	08:12 (6)	07:04	07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40
	17:31	08:44 (6)	19:48	19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	19:00
31	07:46	08:13 (6)	07:03	07:10	06:17	05:45	05:40	06:10	06:46	07:22	08:01	08:02
	17:32	08:44 (6)	19:50	19:50	21:01	21:01	20:54	20:07	20:07	18:17	08:55 (6)	16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case	408	371	25	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Sun reduction	0.57	0.59	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Oper. time red.	0.98	0.98	0.67	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Wind dir. red.	0.69	0.67	0.39	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Total reduction	0.38	0.39	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Total, real	156	143	9	9	9	9	9	9	9	9	9	9

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H351 - H351

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	08:02	16:10 (6)	07:45	07:04	07:08	19:10 (3)	06:17	05:44
	16:56	18 16:28 (6)	17:33	18:11	19:51	19 19:29 (3)	20:28	21:02
2	08:02	16:09 (6)	07:44	07:02	07:06	19:10 (3)	06:15	05:43
	16:56	19 16:28 (6)	17:35	18:12	19:52	19 19:29 (3)	20:29	21:03
3	08:02	16:10 (6)	07:42	07:00	07:04	19:09 (3)	06:14	05:43
	16:57	19 16:29 (6)	17:36	18:14	19:53	20 19:29 (3)	20:30	21:03
4	08:02	16:10 (6)	07:41	06:59	07:02	19:09 (3)	06:12	05:42
	16:58	20 16:30 (6)	17:38	18:15	19:54	19 19:28 (3)	20:31	21:04
5	08:02	16:11 (6)	07:40	06:57	07:00	19:10 (3)	06:11	05:42
	16:59	20 16:31 (6)	17:39	18:16	19:56	16 19:26 (3)	20:33	21:05
6	08:02	16:11 (6)	07:39	06:55	06:58	19:11 (3)	06:10	05:42
	17:00	21 16:32 (6)	17:41	18:18	19:57	15 19:26 (3)	20:34	21:06
7	08:02	16:12 (6)	07:38	06:53	06:57	19:13 (3)	06:08	05:41
	17:01	21 16:33 (6)	17:42	18:19	19:58	10 19:23 (3)	20:35	21:06
8	08:02	16:12 (6)	07:36	07:52	06:55	19:16 (3)	06:07	05:41
	17:03	20 16:32 (6)	17:43	18:20	19:59	3 19:19 (3)	20:36	21:07
9	08:01	16:13 (6)	07:35	07:50	06:53		06:06	05:41
	17:04	20 16:33 (6)	17:45	19:22	20:01		20:37	21:08
10	08:01	16:14 (6)	07:34	07:48	06:51		06:04	05:40
	17:05	19 16:33 (6)	17:46	19:23	20:02		20:39	21:09
11	08:01	16:14 (6)	07:32	07:46	06:50		06:03	05:40
	17:06	19 16:33 (6)	17:48	19:24	20:03		20:40	21:09
12	08:00	16:15 (6)	07:31	07:44	06:48		06:02	05:40
	17:07	19 16:34 (6)	17:49	19:25	20:04		20:41	21:10
13	08:00	16:15 (6)	07:29	07:43	06:46		06:01	05:40
	17:08	18 16:33 (6)	17:50	19:27	20:06		20:42	21:10
14	07:59	16:16 (6)	07:28	07:41	06:44		06:00	05:40
	17:09	18 16:34 (6)	17:52	19:28	20:07		20:43	21:11
15	07:59	16:17 (6)	07:26	07:39	06:43		05:58	05:40
	17:11	16 16:33 (6)	17:53	19:29	20:08		20:44	21:11
16	07:58	16:18 (6)	07:25	07:37	06:41		05:57	05:40
	17:12	15 16:33 (6)	17:55	19:31	20:09		20:46	21:12
17	07:58	16:19 (6)	07:23	07:35	06:39		05:56	05:40
	17:13	13 16:32 (6)	17:56	19:32	20:11		20:47	21:12
18	07:57	16:21 (6)	07:22	07:33	06:37		05:55	05:40
	17:14	10 16:31 (6)	17:57	19:33	20:12		20:48	21:13
19	07:57	16:22 (6)	07:20	07:32	06:36		05:54	05:40
	17:16	8 16:30 (6)	17:59	19:34	20:13		20:49	21:13
20	07:56		07:19	07:30	06:34		05:53	05:40
	17:17		18:00	19:36	20:14		20:50	21:13
21	07:55		07:17	07:28	06:32		05:52	05:40
	17:18		18:00	19:37	20:15		20:51	21:13
22	07:54		07:16	07:26	06:31		05:51	05:40
	17:20		18:02	19:38	20:17		20:52	21:14
23	07:54		07:14	07:24	06:29		05:50	05:41
	17:21		18:03	19:39	20:18		20:53	21:14
24	07:53		07:12	07:22	06:27		05:50	05:41
	17:22		18:04	19:41	20:19		20:54	21:14
25	07:52		07:11	07:21	06:26		05:49	05:41
	17:24		18:06	19:42	20:20		20:55	21:14
26	07:51		07:09	07:19	06:24		05:48	05:42
	17:25		18:07	19:43	20:22		20:56	21:14
27	07:50		07:07	07:17	06:23		05:47	05:42
	17:27		18:08	19:44	6 19:17 (3)		20:57	21:14
28	07:49		07:06	07:15	06:21		05:46	05:42
	17:28		18:10	19:46	10 19:24 (3)		20:58	21:14
29	07:48			07:13	06:20		05:46	05:43
	17:29			19:47	13 19:25 (3)		20:59	21:14
30	07:47			07:11	06:18		05:45	05:43
	17:31			19:48	15 19:26 (3)		21:00	21:14
31	07:46			07:09	19:11 (3)		05:44	
	17:32			19:49	17 19:28 (3)		21:01	
Potential sun hours	287	292	369	403	458	465		
Total, worst case	333		61	121				
Sun reduction	0.57		0.59	0.61				
Oper. time red.	0.98		0.98	0.98				
Wind dir. red.	0.56		0.60	0.60				
Total reduction	0.31		0.34	0.36				
Total, real	103		21	43				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H351 - H351

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:11	06:47	07:22	07:02	07:41	15:56 (6)	
	21:14	20:53	20:05	19:09	17:15	16:47	19 16:15 (6)	
2	05:44	06:12	06:48	07:23	07:03	07:42	15:56 (6)	
	21:14	20:51	20:03	19:07	17:14	16:47	19 16:15 (6)	
3	05:45	06:13	06:49	07:25	07:05	07:43	15:57 (6)	
	21:14	20:50	20:01	19:05	17:13	16:46	20 16:17 (6)	
4	05:46	06:14	06:50	19:13 (3)	07:26	07:06	07:44	15:57 (6)
	21:14	20:49	19:59	3 19:16 (3)	19:04	17:11	16:46	20 16:17 (6)
5	05:46	06:16	06:52	19:09 (3)	07:27	07:07	07:45	15:57 (6)
	21:13	20:48	19:58	10 19:19 (3)	19:02	17:10	16:46	21 16:18 (6)
6	05:47	06:17	06:53	19:06 (3)	07:28	07:09	07:46	15:57 (6)
	21:13	20:46	19:56	15 19:21 (3)	19:00	17:09	16:46	21 16:18 (6)
7	05:48	06:18	06:54	19:06 (3)	07:30	07:10	07:47	15:58 (6)
	21:13	20:45	19:54	16 19:22 (3)	18:56	17:07	16:45	20 16:18 (6)
8	05:48	06:19	06:55	19:04 (3)	07:31	07:11	07:48	15:58 (6)
	21:12	20:44	19:52	19 19:23 (3)	18:54	17:06	16:45	20 16:18 (6)
9	05:49	06:20	06:56	19:03 (3)	07:32	07:13	07:49	15:59 (6)
	21:12	20:42	19:50	20 19:23 (3)	18:53	17:05	16:45	19 16:18 (6)
10	05:50	06:21	06:57	19:03 (3)	07:33	07:14	07:50	15:59 (6)
	21:11	20:41	19:48	19 19:22 (3)	18:51	17:04	16:45	19 16:18 (6)
11	05:50	06:22	06:59	19:02 (3)	07:35	07:15	07:51	16:00 (6)
	21:11	20:39	19:47	20 19:22 (3)	18:49	17:03	16:45	18 16:18 (6)
12	05:51	06:24	07:00	19:02 (3)	07:36	07:17	07:52	16:00 (6)
	21:10	20:38	19:45	18 19:20 (3)	18:47	17:01	16:45	18 16:18 (6)
13	05:52	06:25	07:01	19:02 (3)	07:37	07:18	07:53	16:00 (6)
	21:10	20:36	19:43	16 19:18 (3)	18:46	17:00	16:45	17 16:17 (6)
14	05:53	06:26	07:02	19:02 (3)	07:38	07:19	07:54	16:01 (6)
	21:09	20:35	19:41	14 19:16 (3)	18:44	16:59	16:46	17 16:18 (6)
15	05:54	06:27	07:03	19:04 (3)	07:40	07:21	07:55	16:01 (6)
	21:09	20:33	19:39	11 19:15 (3)	18:42	16:58	16:46	17 16:18 (6)
16	05:55	06:28	07:04	19:06 (3)	07:41	07:22	07:55	16:02 (6)
	21:08	20:32	19:37	7 19:13 (3)	18:40	16:57	16:46	16 16:18 (6)
17	05:56	06:29	07:06	07:42	07:23	07:56	16:02 (6)	
	21:07	20:30	19:35	18:39	16:56	16:46	16 16:18 (6)	
18	05:57	06:31	07:07	07:43	07:25	07:57	16:03 (6)	
	21:07	20:29	19:33	18:37	16:55	16:47	16 16:19 (6)	
19	05:58	06:32	07:08	07:45	07:26	07:57	16:04 (6)	
	21:06	20:27	19:32	18:35	16:55	16:47	15 16:19 (6)	
20	05:58	06:33	07:09	07:46	07:27	07:58	16:04 (6)	
	21:05	20:25	19:30	18:34	16:54	16:47	15 16:19 (6)	
21	05:59	06:34	07:10	07:47	07:29	07:58	16:05 (6)	
	21:04	20:24	19:28	18:32	16:53	16:48	15 16:20 (6)	
22	06:00	06:35	07:12	07:49	07:30	07:59	16:05 (6)	
	21:03	20:22	19:26	18:30	16:52	16:48	15 16:20 (6)	
23	06:01	06:36	07:13	07:50	07:31	07:59	16:06 (6)	
	21:02	20:20	19:24	18:29	16:51	7 16:07 (6)	16:49	15 16:21 (6)
24	06:03	06:38	07:14	07:51	07:33	15:58 (6)	08:00	16:06 (6)
	21:01	20:19	19:22	18:27	16:51	10 16:08 (6)	16:49	15 16:21 (6)
25	06:04	06:39	07:15	07:53	07:34	15:57 (6)	08:00	16:06 (6)
	21:00	20:17	19:20	18:26	16:50	13 16:10 (6)	16:50	15 16:21 (6)
26	06:05	06:40	07:16	07:54	07:35	15:57 (6)	08:01	16:07 (6)
	20:59	20:15	19:18	18:24	16:49	14 16:11 (6)	16:51	16 16:23 (6)
27	06:06	06:41	07:17	07:55	07:36	15:56 (6)	08:01	16:07 (6)
	20:58	20:14	19:17	18:23	16:49	16 16:12 (6)	16:51	16 16:23 (6)
28	06:07	06:42	07:19	07:57	07:37	15:56 (6)	08:01	16:07 (6)
	20:57	20:12	19:15	18:21	16:48	18 16:14 (6)	16:52	17 16:24 (6)
29	06:08	06:43	07:20	07:58	07:39	15:56 (6)	08:01	16:08 (6)
	20:56	20:10	19:13	18:20	16:48	18 16:14 (6)	16:53	16 16:24 (6)
30	06:09	06:45	07:21	07:59	07:40	15:56 (6)	08:02	16:08 (6)
	20:55	20:08	19:11	18:18	16:47	19 16:15 (6)	16:54	17 16:25 (6)
31	06:10	06:46		08:01		08:02	16:08 (6)	
	20:54	20:07		18:17		16:54	18 16:26 (6)	
Potential sun hours	471	435	377	341	289	276		
Total, worst case			188		115		538	
Sun reduction			0.69		0.50		0.49	
Oper. time red.			0.98		0.98		0.98	
Wind dir. red.			0.60		0.56		0.56	
Total reduction			0.40		0.27		0.27	
Total, real			76		31		143	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H352 - H352

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H353 - H353

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H354 - H354

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56 15	09:12 (11) 09:27 (11) 17:33	07:45	07:04 07:08	06:17 05:44	05:44 05:44	06:11 06:47	07:22 19:09			07:02 07:15	07:41 16:47
2	08:02 16:56 14	09:13 (11) 09:27 (11) 17:35	07:44	07:02 07:06	06:15 06:15	05:43 05:44	06:12 06:48	07:23 19:07			07:03 07:14	07:42 16:47
3	08:02 16:57 11	09:15 (11) 09:26 (11) 17:36	07:42	07:00 07:04	06:14 06:14	05:43 05:45	06:13 06:49	07:25 19:05			07:05 07:13	07:43 16:46
4	08:02 16:58 8	09:17 (11) 09:25 (11) 17:38	07:41	06:59 07:02	06:12 06:12	05:42 05:45	06:14 06:50	07:26 19:03			07:06 07:11	07:44 16:46
5	08:02 16:59	07:40 07:39	07:40	06:57 07:00	06:11 06:11	05:42 05:46	06:16 06:52	07:27 19:02			07:07 07:10	07:45 16:46
6	08:02 17:00	07:39 07:40	07:39	06:55 06:58	06:10 06:10	05:41 05:47	06:17 06:53	07:28 19:00			07:09 07:10	07:46 16:46
7	08:02 17:01	07:37 07:42	07:37	06:53 06:58	06:07 06:08	05:41 05:41	06:18 06:54	07:30 19:00			07:10 07:17	07:47 16:45
8	08:01 17:02	07:36 07:43	07:36	07:52 07:59	06:05 06:06	05:41 05:41	06:19 06:56	07:31 19:00			07:11 07:13	07:48 16:45
9	08:01 17:04	07:35 07:45	07:35	07:50 07:59	06:06 06:06	05:41 05:41	06:20 06:56	07:32 19:00			07:13 07:15	07:49 16:45
10	08:01 17:05	07:33 07:46	07:33	07:55 (14) 07:56 (14)	06:04 06:04	05:40 05:40	06:21 06:57	07:33 19:00			07:14 07:15	07:50 16:45
11	08:01 17:06	07:32 07:48	07:32	07:53 (14) 07:56 (14)	06:03 06:03	05:40 05:40	06:22 06:59	07:34 19:00			07:15 07:17	07:51 16:45
12	08:00 17:07	07:31 07:49	07:31	07:52 (14) 07:57 (14)	06:02 06:04	05:40 05:40	06:24 06:59	07:36 19:00			07:17 07:18	07:52 16:45
13	08:00 17:08	07:29 07:50	07:29	07:51 (14) 07:58 (14)	06:06 06:06	05:40 05:40	06:25 06:59	07:37 19:00			07:18 07:19	07:53 16:45
14	07:59 17:09	07:28 07:52	07:28	07:49 (14) 07:58 (14)	06:44 06:44	05:59 05:59	06:26 06:59	07:38 19:00		17:59 (8)	07:19 07:21	07:54 16:46
15	07:59 17:11	07:26 07:53	07:26	07:47 (14) 17:28 (8)	06:42 06:42	05:58 05:58	06:27 06:59	07:40 19:00		18:05 (8)	07:21 07:22	07:54 16:46
16	07:58 17:12	07:25 07:55	07:25	07:46 (14) 17:30 (8)	06:41 06:41	05:57 05:57	06:28 06:59	07:41 19:00		18:07 (8)	07:22 07:23	07:55 16:46
17	07:58 17:13	07:23 07:56	07:23	07:44 (14) 17:31 (8)	06:39 06:39	05:56 05:56	06:29 06:59	07:42 19:00		18:08 (8)	07:23 07:24	07:56 16:46
18	07:57 17:14	07:22 07:57	07:22	07:44 (14) 17:34 (8)	06:37 06:37	05:55 05:55	06:31 06:59	07:43 19:00		18:10 (8)	07:25 07:26	07:57 16:46
19	07:56 17:16	07:20 07:59	07:20	07:46 (14) 17:35 (8)	06:36 06:36	05:54 05:54	06:32 06:59	07:45 19:00		18:11 (8)	07:26 07:27	07:57 16:46
20	07:56 17:17	07:19 08:00	07:19	07:46 (14) 17:37 (8)	06:34 06:34	05:53 05:53	06:33 06:59	07:46 19:00		18:12 (8)	07:27 07:28	07:58 16:46
21	07:55 17:18	07:17 08:00	07:17	07:46 (14) 17:38 (8)	06:32 06:32	05:52 05:52	06:34 06:59	07:47 19:00		18:13 (8)	07:29 07:30	07:58 16:46
22	07:54 17:20	07:16 08:01	07:16	07:46 (14) 17:39 (8)	06:31 06:31	05:51 05:51	06:35 06:59	07:49 19:00		18:14 (8)	07:30 07:31	07:59 16:46
23	07:53 17:21	07:14 08:03	07:14	07:46 (14) 17:40 (8)	06:29 06:29	05:50 05:50	06:36 06:59	07:50 19:00		18:15 (8)	07:31 07:32	07:59 16:46
24	07:53 17:22	07:12 08:04	07:12	07:46 (14) 17:41 (8)	06:27 06:27	05:49 05:49	06:38 06:59	07:51 19:00		18:16 (8)	07:32 07:33	08:00 16:46
25	07:52 17:24	07:11 08:06	07:11	07:46 (14) 17:42 (8)	06:26 06:26	05:49 05:49	06:39 06:59	07:52 19:00		18:17 (8)	07:34 07:35	08:01 16:46
26	07:51 17:25	07:09 08:07	07:09	07:46 (14) 17:43 (8)	06:24 06:24	05:48 05:48	06:40 06:59	07:54 19:00		18:18 (8)	07:36 07:37	08:01 16:46
27	07:50 17:26	07:07 08:08	07:07	07:46 (14) 17:44 (8)	06:23 06:23	05:47 05:47	06:41 06:59	07:55 19:00		18:19 (8)	07:37 07:38	08:01 16:46
28	07:49 17:28	07:06 08:10	07:06	07:46 (14) 17:45 (8)	06:21 06:21	05:46 05:46	06:42 06:59	07:56 19:00		18:20 (8)	07:38 07:39	08:01 16:46
29	07:48 17:29	07:05 08:11	07:05	07:46 (14) 17:46 (8)	06:20 06:20	05:45 05:45	06:43 06:59	07:57 19:00		18:21 (8)	07:39 07:40	08:01 16:46
30	07:47 17:31	07:04 08:12	07:04	07:46 (14) 17:47 (8)	06:18 06:18	05:44 05:44	06:44 06:59	07:58 19:00		18:22 (8)	07:40 07:41	08:01 16:46
31	07:46 17:32	07:03 08:13	07:03	07:46 (14) 17:48 (8)	06:17 06:17	05:43 05:43	06:45 06:59	07:59 19:00		18:23 (8)	07:41 07:42	08:01 16:46
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case	48	256									1	449
Sun reduction	0.57	0.59									0.50	0.49
Oper. time red.	0.98	0.98									0.98	0.98
Wind dir. red.	0.71	0.58									0.65	0.71
Total reduction	0.40	0.34									0.32	0.34
Total, real	19	86									0	154

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H355 - H355

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:02	07:44	07:04	17:20 (64)	07:07	18:50 (65)	06:17	05:44	05:44	06:11	06:47	18:57 (65)	07:22	07:02	07:41	
	16:56	17:33	18:11	20 17:40 (64)	19:50	32 19:22 (65)	20:27	21:01	21:14	20:52	20:05	13 19:10 (65)	19:09	17:15	16:47	
2	08:02	07:43	07:02	17:21 (64)	07:06	18:50 (65)	06:15	05:43	05:44	06:12	06:48	18:54 (65)	07:23	07:03	07:42	
	16:56	17:35	18:12	17 17:38 (64)	19:52	33 19:23 (65)	20:29	21:02	21:13	20:51	20:03	18 19:12 (65)	19:07	17:14	16:47	
3	08:02	07:42	07:00	17:23 (64)	07:04	18:50 (65)	06:14	05:43	05:45	06:13	06:49	18:51 (65)	07:24	07:04	07:43	
	16:57	17:36	18:13	14 17:37 (64)	19:53	32 19:22 (65)	20:30	21:03	21:13	20:50	20:01	22 19:13 (65)	19:05	17:12	16:46	
4	08:02	07:41	06:58	17:25 (64)	07:02	18:50 (65)	06:12	05:42	05:45	06:14	06:50	18:49 (65)	07:26	07:06	07:44	
	16:58	17:38	18:15	10 17:35 (64)	19:54	31 19:21 (65)	20:31	21:04	21:13	20:48	19:59	25 19:14 (65)	19:03	17:11	16:46	
5	08:01	07:40	06:57	17:26 (64)	07:00	18:50 (65)	06:11	05:42	05:46	06:15	06:51	18:48 (65)	07:27	07:07	07:45	
	16:59	17:39	18:16	19:55	30 19:20 (65)	20:32	21:05	21:13	20:47	19:57	27 19:15 (65)	19:01	17:10	16:46		
6	08:01	07:38	06:55	17:27 (64)	06:58	18:50 (65)	06:10	05:42	05:47	06:17	06:53	18:46 (65)	07:28	07:08	07:46	
	17:00	17:40	18:17	19:57	29 19:19 (65)	20:33	21:05	21:13	20:46	19:55	29 19:15 (65)	19:00	17:08	16:46		
7	08:01	07:37	06:53	17:28 (64)	06:56	18:52 (65)	06:08	05:41	05:47	06:18	06:54	18:45 (65)	07:29	07:10	07:47	
	17:01	17:42	18:19	19:58	27 19:19 (65)	20:35	21:06	21:12	20:45	19:54	30 19:15 (65)	18:56	17:07	16:45		
8	08:01	07:36	07:51	17:29 (64)	06:55	18:52 (65)	06:07	05:41	05:48	06:19	06:55	18:44 (65)	07:31	07:11	07:48	
	17:02	17:43	18:20	19:59	25 19:17 (65)	20:36	21:07	21:12	20:43	19:52	31 19:15 (65)	18:54	17:06	16:45		
9	08:01	07:35	07:50	17:30 (64)	06:53	18:53 (65)	06:06	05:41	05:49	06:20	06:56	18:44 (65)	07:32	18:01 (64)	07:12	07:49
	17:04	17:45	19:21	20:00	22 19:15 (65)	20:37	21:07	21:11	20:42	19:50	32 19:16 (65)	18:52	17:05	16:45		
10	08:01	07:33	07:48	17:31 (64)	06:51	18:55 (65)	06:04	05:40	05:50	06:21	06:57	18:44 (65)	07:33	7 18:08 (64)	17:05	16:45
	17:05	17:46	19:23	20:01	18 19:13 (65)	20:38	21:08	21:11	20:40	19:48	32 19:16 (65)	18:51	12 18:10 (64)	17:04	16:45	
11	08:00	07:32	07:46	17:32 (64)	06:49	18:57 (65)	06:03	05:40	05:50	06:22	06:58	18:43 (65)	07:34	12 18:11 (64)	17:02	16:45
	17:06	17:47	19:24	20:03	13 19:10 (65)	20:39	21:09	21:11	20:39	19:46	33 19:16 (65)	18:49	16 18:11 (64)	17:02	16:45	
12	08:00	07:30	07:44	17:33 (64)	06:48	18:57 (65)	06:02	05:40	05:51	06:24	07:00	18:42 (65)	07:35	17:55 (64)	17:02	16:45
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:37	20:37	19:44	33 19:15 (65)	18:47	18 18:13 (64)	17:01	16:45	
13	07:59	07:29	07:42	17:34 (64)	06:46	18:58 (65)	06:01	05:40	05:52	06:25	07:01	18:42 (65)	07:37	17:53 (64)	17:01	16:45
	17:08	17:50	19:27	20:05	20:42	21:10	21:09	20:36	20:36	19:43	32 19:14 (65)	18:45	20 18:13 (64)	17:00	16:45	
14	07:59	07:28	07:41	17:35 (64)	06:44	18:59 (65)	05:59	05:40	05:53	06:26	07:02	18:42 (65)	07:38	17:52 (64)	17:01	16:45
	17:09	17:52	19:28	20:06	20:43	21:10	21:09	20:34	20:34	19:41	31 19:13 (65)	18:44	21 18:13 (64)	16:59	16:46	
15	07:58	07:26	07:39	17:36 (64)	06:42	18:58 (65)	05:58	05:40	05:54	06:27	07:03	18:42 (65)	07:39	17:52 (64)	17:02	16:45
	17:11	17:53	19:29	20:08	20:44	21:11	21:08	20:33	20:33	19:39	30 19:12 (65)	18:42	22 18:14 (64)	16:58	16:46	
16	07:58	07:25	07:37	17:37 (64)	06:41	18:57 (65)	05:57	05:40	05:55	06:28	07:04	18:42 (65)	07:41	17:52 (64)	17:02	16:45
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	20:31	19:37	29 19:11 (65)	18:40	22 18:14 (64)	16:57	16:46	
17	07:57	07:23	07:35	17:38 (64)	06:39	18:59 (65)	05:56	05:40	05:56	06:29	07:05	18:44 (65)	07:42	17:51 (64)	17:03	16:45
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	20:30	19:35	27 19:11 (65)	18:39	22 18:13 (64)	16:56	16:46	
18	07:57	07:22	07:33	17:39 (64)	06:37	18:58 (65)	05:55	05:40	05:57	06:30	07:07	18:44 (65)	07:43	17:52 (64)	17:04	16:45
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	20:28	19:33	25 19:09 (65)	18:37	21 18:13 (64)	16:55	16:47	
19	07:56	07:20	07:31	17:40 (64)	06:36	18:59 (65)	05:54	05:40	05:57	06:32	07:08	18:45 (65)	07:44	17:52 (64)	17:06	16:45
	17:16	17:59	9 17:35 (64)	19:34	20:13	20:48	21:12	21:05	20:27	19:31	22 19:07 (65)	18:35	19 18:11 (64)	16:55	16:47	
20	07:55	07:18	07:26	17:41 (64)	06:34	18:59 (65)	05:53	05:40	05:58	06:33	07:09	18:47 (65)	07:46	17:52 (64)	17:07	16:45
	17:17	18:00	12 17:36 (64)	19:35	20:14	20:49	21:13	21:04	20:25	19:29	17 19:04 (65)	18:34	17 18:09 (64)	16:54	16:47	
21	07:55	07:17	07:28	17:42 (64)	06:32	18:59 (65)	05:52	05:40	05:59	06:34	07:10	18:50 (65)	07:47	17:54 (64)	17:08	16:45
	17:18	18:00	15 17:38 (64)	19:37	20:15	20:51	21:13	21:04	20:23	19:28	11 19:01 (65)	18:32	14 18:08 (64)	16:53	16:48	
22	07:54	07:15	07:26	17:43 (64)	06:31	18:59 (65)	05:51	05:40	06:00	06:35	07:11	18:48	17:55 (64)	17:30	16:45	
	17:20	18:01	18 17:39 (64)	19:38	9 19:14 (65)	20:16	20:52	21:13	21:03	20:22	19:26	18:30	11 18:06 (64)	16:52	16:48	
23	07:53	07:14	07:24	17:44 (64)	06:29	18:59 (65)	05:50	05:41	06:01	06:36	07:12	18:46 (65)	07:50	17:57 (64)	17:31	16:45
	17:21	18:03	20 17:40 (64)	19:39	16 19:17 (65)	20:18	20:53	21:13	21:02	20:20	19:24	18:29	7 18:04 (64)	16:51	16:49	
24	07:52	07:12	07:22	17:45 (64)	06:27	18:58 (65)	05:49	05:41	06:02	06:37	07:14	18:47 (65)	07:51	17:52 (64)	17:32	16:45
	17:22	18:04	22 17:42 (64)	19:40	21 19:19 (65)	20:19	20:54	21:14	21:01	20:18	19:22	18:27	17:54 (64)	16:51	16:49	
25	07:51	07:10	07:20	17:46 (64)	06:26	18:56 (65)	05:49	05:41	06:03	06:39	07:15	18:46 (65)	07:52	17:53 (64)	17:33	16:45
	17:24	18:05	22 17:42 (64)	19:42	24 19:20 (65)	20:20	20:55	21:14	21:00	20:17	19:20	18:26	17:54 (64)	16:50	16:45	
26	07:51	07:09	07:18	17:47 (64)	06:24	18:56 (65)	05:48	05:42	06:05	06:40	07:16	18:47 (65)	07:56	17:55 (64)	17:35	16:45
	17:25	18:07	22 17:41 (64)	19:43	26 19:22 (65)	20:21	20:56	21:14	20:59	20:15	19:18	18:24	17:54 (64)	16:49	16:51	
27	07:50	07:07	07:17	17:48 (64)	06:23	18:54 (65)	05:47	05:42	06:06	06:41	07:17	18:48 (65)	07:55	17:56 (64)	17:36	16:45
	17:26	18:08	22 17:42 (64)	19:44	29 19:23 (65)	20:22	20:57	21:14	20:58	20:13	19:16	18:22	17:55 (64)	16:49	16:51	
28	07:49	07:05	07:15	17:50 (64)	06:21	18:53 (65)	05:46	05:42	06:07	06:42	07:18	18:49 (65)	07:56	17:57 (64)	17:37	16:45
	17:28	18:09	21 17:41 (64)	19:45	30 19:23 (65)	20:24	20:58	21:14	20:57	20:12	19:14	18:21	17:56 (64)	16:48	16:52	
29	07:48	07:13	07:23	17:51 (64)	06:20	18:52 (65)	05:46	05:43	06:08	06:43	07:20	18:50 (65)	07:57	17:58 (64)	17:38	16:45
	17:29	18:10	31 19:23 (65)	20:25	20:59	21:14	20:56	21:14	20:56	20:10	19:13	18:19	17:58 (64)	16:48	16:53	
30	07:47	07:11	07:21	17:52 (64)	06:18	18:51 (65)	05:45	05:43	06:09	06:44	07:21	18:51 (65)	07:59	17:59 (64)	17:39	16:45
	17:31	18:12	19:48	32 19:23 (65)	20:26	20:59	21:14	20:55	20:08	19:11	18:18	17:59 (64)	17:59 (64)	16:47	16:54	
31	07:45	07:09	07:19	17:53 (64)	06:15	18:50 (65)	05:44	05:40	06:10	06:46	18:00	18:00	18:17	17:59 (64)	17:39	16:45
	17:32	18:13	19:49	33 19:23 (65)	20:27	21:00	21:13	20:53	20:06	19:11	18:17	17:59 (64)	18:17	17:59 (64)	17:39	16:45
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276				
Total, worst case		183		312		292		549		249						
Sun reduction		0.59		0.59		0.61										

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H356 - H356

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:55	17:33	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:41
	16:56	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:46
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:12	16:46
4	08:01	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:09	05:41	05:47	06:16	06:52	07:28	07:08	07:46
	17:00	17:40	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:09	07:47
	17:01	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:45
8	08:01	07:36	07:51	06:54	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:34	07:49	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:44	19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:13	07:50
	17:04	17:46	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01	16:45
13	07:59	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:52
	17:08	17:50	19:26	20:05	20:41	21:10	21:09	20:36	19:42	18:45	17:00	16:45
14	07:59	07:27	07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:51	19:28	20:06	20:43	21:10	21:09	20:34	19:40	18:43	16:59	16:45
15	07:58	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:20	07:54
	17:10	17:53	19:29	20:07	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:40	05:57	05:39	05:55	06:28	07:04	07:40	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:31	20:10	20:46	21:11	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:21	07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:24	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:25	07:57
	17:15	17:58	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:53	16:47
21	07:54	07:17	07:27	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:38	20:16	20:51	21:13	21:03	20:22	19:25	18:30	16:52	16:48
23	07:53	07:13	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:49	07:31	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:28	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:50	16:49
25	07:51	07:10	07:20	06:26	05:48	05:41	06:03	06:38	07:15	07:52	07:33	08:00
	17:23	18:05	19:41	20:20	20:54	21:13	21:00	20:17	19:20	18:25	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:49	07:07	07:16	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:00
	17:26	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:48	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:23	20:57	21:14	20:57	20:11	19:14	18:21	16:48	16:52
29	07:47		07:13	06:19	05:45	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:46	20:25	20:58	21:14	20:55	20:10	19:12	18:19	16:48	16:53
30	07:46		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:39	08:01
	17:30		19:48	20:26	20:59	21:14	20:54	20:08	19:10	18:18	16:47	16:53
31	07:45		07:09		05:44		06:10	06:45		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H357 - H357

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01 16:55	07:44 17:33	07:03 18:11	07:07 19:50	06:16 20:27	05:44 21:01	05:44 21:13	06:11 20:52	06:47 20:04	07:22 19:09	07:01 17:15	07:40 16:47
2	08:01 16:56	07:43 17:35	07:02 18:12	07:05 19:51	06:15 20:28	05:43 21:02	05:43 21:13	06:12 20:51	06:48 20:02	07:23 19:07	07:03 17:14	07:41 16:46
3	08:01 16:57	07:42 17:36	07:00 18:13	07:03 19:53	06:14 20:29	05:43 21:03	05:45 21:13	06:13 20:49	06:49 20:01	07:24 19:05	07:04 17:12	07:42 16:46
4	08:01 16:58	07:41 17:37	06:58 18:15	07:02 19:54	06:12 20:31	05:42 21:03	05:45 21:13	06:14 20:48	06:50 19:59	07:25 19:03	07:05 17:11	07:44 16:46
5	08:01 16:59	07:39 17:39	06:56 18:16	07:00 19:55	06:11 20:32	05:42 21:04	05:46 21:13	06:15 20:47	06:51 19:57	07:27 19:01	07:07 17:10	07:45 16:46
6	08:01 17:00	07:38 17:40	06:55 18:17	06:58 19:56	06:09 20:33	05:41 21:05	05:47 21:12	06:16 20:46	06:52 19:55	07:28 18:58	07:08 17:08	07:46 16:45
7	08:01 17:01	07:37 17:42	06:53 18:19	06:56 19:58	06:08 20:34	05:41 21:06	05:47 21:12	06:18 20:44	06:54 19:53	07:29 18:56	07:09 17:07	07:47 16:45
8	08:01 17:02	07:36 17:43	06:51 18:20	06:54 19:59	06:07 20:35	05:41 21:06	05:48 21:12	06:19 20:43	06:55 19:52	07:30 18:54	07:11 17:06	07:48 16:45
9	08:00 17:03	07:34 17:44	06:49 19:21	06:53 20:00	06:05 20:37	05:40 21:07	05:49 21:11	06:20 20:41	06:56 19:50	07:31 18:52	07:12 17:05	07:49 16:45
10	08:00 17:05	07:33 17:46	06:48 19:22	06:51 20:01	06:04 20:38	05:40 21:08	05:49 21:11	06:21 20:40	06:57 19:48	07:33 18:50	07:13 17:03	07:50 16:45
11	08:00 17:06	07:32 17:47	06:46 19:24	06:49 20:02	06:03 20:39	05:40 21:08	05:50 21:10	06:22 20:39	06:58 19:46	07:34 18:49	07:15 17:02	07:50 16:45
12	08:00 17:07	07:30 17:49	06:44 19:25	06:47 20:04	06:02 20:40	05:40 21:09	05:51 21:10	06:23 20:37	06:59 19:44	07:35 18:47	07:16 17:01	07:51 16:45
13	07:59 17:08	07:29 17:50	06:42 19:26	06:46 20:05	06:00 20:41	05:40 21:09	05:52 21:09	06:24 20:36	07:01 19:42	07:36 18:45	07:17 17:00	07:52 16:45
14	07:59 17:09	07:27 17:51	06:40 19:28	06:44 20:06	05:59 20:43	05:40 21:10	05:53 21:09	06:26 20:34	07:02 19:40	07:38 18:43	07:19 16:59	07:53 16:45
15	07:58 17:10	07:26 17:53	06:38 19:29	06:42 20:07	05:58 20:44	05:40 21:10	05:54 21:08	06:27 20:33	07:03 19:39	07:39 18:42	07:20 16:58	07:54 16:46
16	07:58 17:12	07:24 17:54	06:37 19:30	06:40 20:09	05:57 20:45	05:39 21:11	05:55 21:07	06:28 20:31	07:04 19:37	07:40 18:40	07:21 16:57	07:54 16:46
17	07:57 17:13	07:23 17:56	06:35 19:31	06:39 20:10	05:56 20:46	05:40 21:11	05:55 21:06	06:29 20:30	07:05 19:35	07:42 18:38	07:23 16:56	07:55 16:46
18	07:56 17:14	07:21 17:57	06:33 19:33	06:37 20:11	05:55 20:47	05:40 21:12	05:56 21:06	06:30 20:28	07:06 19:33	07:43 18:37	07:24 16:55	07:56 16:46
19	07:56 17:15	07:20 17:58	06:31 19:34	06:35 20:12	05:54 20:48	05:40 21:12	05:57 21:05	06:31 20:26	07:08 19:31	07:44 18:35	07:25 16:54	07:56 16:47
20	07:55 17:17	07:18 18:00	06:29 19:35	06:34 20:14	05:53 20:49	05:40 21:12	05:58 21:04	06:33 20:25	07:09 19:29	07:45 18:33	07:27 16:53	07:57 16:47
21	07:54 17:18	07:17 18:00	06:27 19:36	06:32 20:15	05:52 20:50	05:40 21:13	05:59 21:03	06:34 20:23	07:10 19:27	07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:19	07:15 18:01	06:26 19:38	06:30 20:16	05:51 20:51	05:40 21:13	06:00 21:02	06:35 20:21	07:11 19:25	07:48 18:30	07:29 16:52	07:58 16:48
23	07:53 17:21	07:13 18:02	06:24 19:39	06:29 20:17	05:50 20:52	05:40 21:13	06:01 21:02	06:36 20:20	07:12 19:24	07:49 18:28	07:31 16:51	07:59 16:49
24	07:52 17:22	07:12 18:04	06:22 19:40	06:27 20:18	05:49 20:53	05:41 21:13	06:02 21:01	06:37 20:18	07:13 19:22	07:51 18:27	07:32 16:51	07:59 16:49
25	07:51 17:23	07:10 18:05	06:20 19:41	06:26 20:20	05:48 20:54	05:41 21:13	06:03 21:00	06:38 20:16	07:15 19:20	07:52 18:25	07:33 16:50	07:59 16:50
26	07:50 17:25	07:08 18:07	06:18 19:43	06:24 20:21	05:48 20:55	05:41 21:13	06:04 20:59	06:40 20:15	07:16 19:18	07:53 18:24	07:34 16:49	08:00 16:50
27	07:49 17:26	07:07 18:08	06:16 19:44	06:22 20:22	05:47 20:56	05:42 21:13	06:05 20:58	06:41 20:13	07:17 19:16	07:55 18:22	07:35 16:49	08:00 16:51
28	07:48 17:28	07:05 18:09	06:14 19:45	06:21 20:23	05:46 20:57	05:42 21:13	06:06 20:56	06:42 20:11	07:18 19:14	07:56 18:21	07:37 16:48	08:00 16:52
29	07:47 17:29	07:04 19:46	06:13 20:25	06:19 20:58	05:45 20:58	05:43 21:13	06:08 20:55	06:43 20:10	07:19 19:12	07:57 18:19	07:38 16:48	08:01 16:53
30	07:46 17:30	07:03 19:48	06:11 20:26	06:18 20:59	05:45 21:13	05:43 20:54	06:09 21:08	06:44 20:08	07:21 19:10	07:59 18:18	07:39 16:47	08:01 16:53
31	07:45 17:32	07:02 19:49	06:09 20:26	06:16 21:00	05:44 21:00	06:10 20:53	06:45 20:06	08:00 18:16	08:00 18:16	08:00 18:16	08:01 16:54	08:01 16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H358 - H358

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	17:04 (83)	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:40
	16:56	17:33	4 17:08 (83)	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15
2	08:01	07:43	17:04 (83)	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:41
	16:56	17:35	5 17:09 (83)	18:12	19:51	20:28	21:02	21:13	20:51	20:02	19:07	17:14
3	08:01	07:42	17:03 (83)	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:42
	16:57	17:36	8 17:11 (83)	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:12
4	08:01	07:41	17:02 (83)	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:25	07:44
	16:58	17:38	10 17:12 (83)	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11
5	08:01	07:39	17:02 (83)	06:56	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:45
	16:59	17:39	12 17:14 (83)	18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:01	17:10
6	08:01	07:38	17:03 (83)	06:55	06:58	06:09	05:41	05:47	06:17	06:52	07:28	07:46
	17:00	17:40	12 17:15 (83)	18:17	19:56	20:33	21:05	21:12	20:46	19:55	18:58	17:08
7	08:01	07:37	17:02 (83)	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:47
	17:01	17:42	14 17:16 (83)	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07
8	08:01	07:36	17:03 (83)	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:48
	17:02	17:43	15 17:18 (83)	18:20	19:59	20:36	21:06	21:12	20:43	19:52	18:54	17:06
9	08:00	07:34	17:04 (83)	07:49	06:53	06:05	05:41	05:49	06:20	06:56	07:32	07:49
	17:04	17:45	14 17:18 (83)	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05
10	08:00	07:33	17:04 (83)	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:50
	17:05	17:46	13 17:17 (83)	19:22	20:01	20:38	21:08	21:11	20:40	19:48	18:50	17:04
11	08:00	07:32	17:06 (83)	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:50
	17:06	17:47	10 17:16 (83)	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:02
12	07:59	07:30	17:09 (83)	07:44	06:47	06:02	05:40	05:51	06:23	06:59	07:35	07:51
	17:07	17:49	4 17:13 (83)	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:01
13	07:59	07:29		07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:52
	17:08	17:50		19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00
14	07:59	07:27		07:40	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:53
	17:09	17:52		19:28	20:06	20:43	21:10	21:08	20:34	19:40	18:43	16:59
15	07:58	07:26		07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:54
	17:11	17:53		19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58
16	07:58	07:24		07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:54
	17:12	17:54		19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57
17	07:57	07:23		07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:55
	17:13	17:56		19:31	20:10	20:46	21:11	21:06	20:30	19:35	18:38	16:56
18	07:56	07:21		07:33	06:37	05:55	05:40	05:56	06:30	07:06	07:43	07:56
	17:14	17:57		19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55
19	07:56	07:20		07:31	06:35	05:54	05:40	05:57	06:32	07:08	07:44	07:56
	17:16	17:58		19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:54
20	07:55	07:18		07:29	06:34	05:53	05:40	05:58	06:33	07:09	07:45	07:57
	17:17	18:00		19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:33	16:54
21	07:54	07:17		07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:58
	17:18	18:00		19:36	20:15	20:50	21:13	21:03	20:23	19:27	18:32	16:53
22	07:54	07:15		07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:58
	17:20	18:01		19:38	20:16	20:51	21:13	21:02	20:21	19:25	18:30	16:52
23	07:53	07:13		07:24	06:29	05:50	05:41	06:01	06:36	07:12	07:49	07:59
	17:21	18:03		19:39	20:17	20:52	21:13	21:02	20:20	19:24	18:29	16:51
24	07:52	07:12		07:22	06:27	05:49	05:41	06:02	06:37	07:13	07:51	07:59
	17:22	18:04		19:40	20:18	20:53	21:13	21:01	20:18	19:22	18:27	16:51
25	07:51	07:10		07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:59
	17:24	18:05		19:41	20:20	20:54	21:13	21:00	20:16	19:20	18:25	16:50
26	07:50	07:08		07:18	06:24	05:48	05:42	06:04	06:40	07:16	07:53	08:00
	17:25	18:07		19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:49
27	07:49	07:07		07:16	06:23	05:47	05:42	06:06	06:41	07:17	07:55	08:00
	17:26	18:08		19:44	20:22	20:56	21:13	20:58	20:13	19:16	18:22	16:49
28	07:48	07:05		07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	08:00
	17:28	18:09		19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:48
29	07:47			07:13	06:19	05:46	05:43	06:08	06:43	07:19	07:57	08:01
	17:29			19:46	20:25	20:58	21:13	20:55	20:10	19:12	18:19	16:48
30	07:46			07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	08:01
	17:31			19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:47
31	07:45	17:05 (83)		07:09	05:44	05:44	06:10	06:46	08:00	17:36 (83)	16:47	08:01
	17:32	17:06 (83)		19:49	21:00	21:00	20:53	20:06	18:16	17:46 (83)	16:54	16:54
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case	1	121								15	106	
Sun reduction	0.57	0.59								0.63	0.50	
Oper. time red.	0.98	0.98								0.98	0.98	
Wind dir. red.	0.56	0.56								0.56	0.56	
Total reduction	0.31	0.32								0.34	0.27	
Total, real	0	39								5	29	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H359 - H359

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:01	05:44 21:14	06:11 20:52	06:47 20:05	07:09 (74) 07:20 (74)	07:22 19:09	07:02 17:16	07:41 16:47
2	08:02 16:57	07:43 17:35	07:02 18:12	07:06 19:52	06:15 20:29	05:44 21:02	05:45 21:14	06:12 20:51	06:48 20:03	07:10 (74) 07:19 (74)	07:23 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:42 17:37	07:00 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:13	06:14 20:50	06:49 20:01	07:11 (74) 07:17 (74)	07:25 19:05	07:04 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:54	06:13 20:31	05:43 21:04	05:46 21:13	06:15 20:49	06:51 19:59	07:12 (74) 07:16 (74)	07:26 19:04	07:06 17:11	07:44 16:46
5	08:02 17:00	07:40 17:39	06:57 18:16	07:00 19:56	06:11 20:32	05:42 21:05	05:47 21:13	06:16 20:47	06:52 19:58		07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:05	05:47 21:13	06:17 20:46	06:53 19:56		07:28 19:00	07:08 17:09	07:46 16:46
7	08:01 17:02	07:37 17:42	06:53 18:19	06:57 19:58	06:09 20:35	05:42 21:06	05:48 21:12	06:18 20:45	06:54 19:54		07:30 18:56	07:10 17:08	07:47 16:46
8	08:01 17:03	07:36 17:44	07:52 18:20	06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:43	06:55 19:52		07:31 18:55	07:11 17:06	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:00	06:06 20:37	05:41 21:07	05:49 21:12	06:20 20:42	06:56 19:50		07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:33 17:46	07:48 19:23	06:51 20:02	06:05 20:38	05:41 21:08	05:50 21:11	06:22 20:41	06:58 19:48		07:33 18:51	07:14 17:04	07:50 16:46
11	08:00 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:03 20:39	05:41 21:09	05:51 21:11	06:23 20:39	06:59 19:46		07:34 18:49	07:15 17:03	07:51 16:46
12	08:00 17:07	07:31 17:49	07:44 19:26	06:48 20:04	06:02 20:41	05:40 21:09	05:52 21:10	06:24 20:38	07:00 19:45		07:36 18:47	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:05	06:01 20:42	05:40 21:10	05:52 21:10	06:25 20:36	07:01 19:43		07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:00 20:43	05:40 21:10	05:53 21:09	06:26 20:35	07:02 19:41		07:38 18:44	07:19 17:00	07:53 16:46
15	07:59 17:11	07:26 17:53	07:39 19:29	06:43 20:08	06:03 20:44	05:59 21:11	05:54 21:08	06:27 20:33	07:03 19:39		07:39 18:42	07:21 16:59	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	06:04 20:45	05:58 21:11	05:55 21:08	06:28 20:32	07:05 19:37		07:41 18:41	07:22 16:58	07:55 16:46
17	07:58 17:13	07:23 17:56	07:35 19:32	06:39 20:10	06:04 20:46	05:57 21:12	05:56 21:07	06:30 20:30	07:06 19:35		07:42 18:39	07:23 16:57	07:56 16:47
18	07:57 17:15	07:22 17:58	07:33 19:33	06:38 20:12	06:05 20:47	05:55 21:12	05:57 21:06	06:31 20:28	07:07 19:33		07:43 18:37	07:25 16:56	07:56 16:47
19	07:56 17:16	07:20 17:59	07:32 19:34	06:36 20:13	06:04 20:49	05:54 21:12	05:58 21:05	06:32 20:27	07:08 19:32		07:45 18:35	07:26 16:55	07:57 16:47
20	07:56 17:17	07:19 18:00	07:30 19:36	06:34 20:14	06:03 20:44	05:53 21:13	05:59 21:05	06:33 20:25	07:09 19:30		07:46 18:34	07:27 16:54	07:58 16:48
21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:15	06:03 20:45	05:53 21:13	06:00 21:04	06:34 20:24	07:10 19:28		07:47 18:32	07:28 16:53	07:58 16:48
22	07:54 17:20	07:15 18:02	07:26 19:38	06:31 20:16	06:02 20:52	05:41 21:13	06:01 21:03	06:35 20:22	07:12 19:26		07:48 18:31	07:30 16:52	07:59 16:49
23	07:53 17:21	07:14 18:03	07:24 19:39	06:29 20:18	06:29 20:53	05:41 21:13	06:02 21:02	06:37 20:20	07:13 19:24		07:50 18:29	07:31 16:52	07:59 16:49
24	07:52 17:23	07:12 18:04	07:22 19:41	06:28 20:19	06:28 20:54	05:41 21:14	06:03 21:01	06:38 20:19	07:14 19:22	07:10 (74) 07:16 (74)	07:51 18:27	07:32 16:51	08:00 16:50
25	07:52 17:24	07:11 18:06	07:21 19:42	06:26 20:20	06:26 20:55	05:42 21:14	06:04 21:00	06:39 20:17	07:15 19:20	6 07:16 (74) 07:07 (74)	07:52 18:26	07:33 16:50	16:50 16:50
26	07:51 17:25	07:09 18:07	07:19 19:43	06:25 20:21	06:25 20:56	05:42 21:14	06:05 20:59	06:40 20:15	07:16 19:18	07:05 (74) 07:20 (74)	07:54 18:24	07:35 16:50	08:00 16:51
27	07:50 17:27	07:07 18:08	07:17 19:44	06:23 20:23	06:23 20:57	05:42 21:14	06:06 20:58	06:41 20:13	07:17 19:17	07:04 (74) 07:20 (74)	07:55 18:23	07:36 16:49	08:01 16:52
28	07:49 17:28	07:06 18:10	07:15 19:46	06:21 20:24	06:21 20:58	05:43 21:14	06:07 20:57	06:42 20:12	07:19 19:15	07:04 (74) 07:20 (74)	07:56 18:21	07:37 16:49	08:01 16:52
29	07:48 17:30		07:13 19:47	06:20 20:25	06:20 20:59	05:43 21:14	06:08 20:56	06:44 20:10	07:20 19:13	07:06 (74) 07:21 (74)	07:58 18:20	07:38 16:48	08:01 16:53
30	07:47 17:31		07:11 19:48	06:18 20:26	06:18 21:00	05:44 21:14	06:09 20:55	06:45 20:08	07:21 19:11	07:07 (74) 07:21 (74)	07:59 18:18	07:40 16:48	08:01 16:54
31	07:46 17:32		07:09 19:49		06:17 21:00	05:45 21:04	06:10 20:54	06:46 20:06	07:08 (74) 07:21 (74)		08:00 18:17	08:01 16:55	
Potential sun hours	287	292	369	403	458	464	470	435	377		341	289	276
Total, worst case				132				106	30				
Sun reduction				0.61				0.74	0.69				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.56				0.56	0.56				
Total reduction				0.33				0.40	0.37				
Total, real				44				43	11				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
	Sun set (hh:mm)					

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H360 - H360

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:01	07:44	07:04	07:24 (88)	07:07	06:17
	16:56	17:34	18:11	25 07:49 (88)	19:50	20:27
2	08:01	07:43	07:02	07:22 (88)	07:06	06:15
	16:57	17:35	18:12	28 07:50 (88)	19:52	20:28
3	08:01	07:42	07:00	07:21 (88)	07:04	06:14
	16:58	17:36	18:14	30 07:51 (88)	19:53	20:30
4	08:01	07:41	06:58	07:19 (88)	07:02	06:12
	16:59	17:38	18:15	33 07:52 (88)	19:54	20:31
5	08:01	07:40	06:57	07:17 (88)	07:00	06:11
	17:00	17:39	18:16	35 07:52 (88)	19:55	20:32
6	08:01	08:25 (89) 07:38	06:55	07:15 (88)	06:58	06:10
	17:01	2 08:27 (89) 17:41	18:17	37 07:52 (88)	19:56	20:33
7	08:01	08:25 (89) 07:37	06:53	07:15 (88)	06:57	06:08
	17:02	3 08:28 (89) 17:42	18:19	38 07:53 (88)	19:58	20:34
8	08:01	08:25 (89) 07:36	07:51	08:14 (88)	06:55	06:07
	17:03	4 08:29 (89) 17:43	18:20	39 08:53 (88)	19:59	20:36
9	08:01	08:24 (89) 07:34	07:50	08:14 (88)	06:53	06:06
	17:04	5 08:29 (89) 17:45	19:21	38 08:52 (88)	20:00	20:37
10	08:00	08:24 (89) 07:33	07:48	08:13 (88)	06:51	06:04
	17:05	6 08:30 (89) 17:46	19:23	39 08:52 (88)	20:01	20:38
11	08:00	08:24 (89) 07:32	07:46	08:13 (88)	06:49	06:03
	17:06	7 08:31 (89) 17:48	19:24	38 08:51 (88)	20:03	20:39
12	08:00	08:23 (89) 07:30	07:44	08:13 (88)	06:48	06:02
	17:07	8 08:31 (89) 17:49	19:25	38 08:51 (88)	20:04	20:40
13	07:59	08:23 (89) 07:29	07:42	08:14 (88)	06:46	06:01
	17:08	9 08:32 (89) 17:50	19:27	37 08:51 (88)	20:05	20:41
14	07:59	08:22 (89) 07:27	07:41	08:14 (88)	06:44	06:00
	17:10	10 08:32 (89) 17:52	19:28	36 08:50 (88)	20:06	20:43
15	07:58	08:21 (89) 07:26	07:39	08:14 (88)	06:42	05:58
	17:11	11 08:32 (89) 17:53	19:29	35 08:49 (88)	20:08	20:44
16	07:58	08:21 (89) 07:24	07:37	08:15 (88)	06:41	05:57
	17:12	12 08:33 (89) 17:55	19:30	32 08:47 (88)	20:09	20:45
17	07:57	08:20 (89) 07:23	07:35	08:15 (88)	06:39	05:56
	17:13	13 08:33 (89) 17:56	19:32	31 08:46 (88)	20:10	20:46
18	07:57	08:19 (89) 07:21	07:33	08:16 (88)	06:37	05:55
	17:15	14 08:33 (89) 17:57	19:33	28 08:44 (88)	20:11	20:47
19	07:56	08:19 (89) 07:20	07:31	08:19 (88)	06:36	05:54
	17:16	15 08:34 (89) 17:59	19:34	23 08:42 (88)	20:13	20:48
20	07:55	08:18 (89) 07:18	07:30	08:20 (88)	06:34	05:53
	17:17	16 08:34 (89) 18:00	19:35	20 08:40 (88)	20:14	20:49
21	07:55	08:17 (89) 07:17	07:28	08:23 (88)	06:32	05:52
	17:18	16 08:33 (89) 18:00	1 07:38 (90) 19:37	13 08:36 (88)	20:15	20:50
22	07:54	08:16 (89) 07:15	07:36 (90) 07:26		06:31	05:51
	17:20	17 08:33 (89) 18:01	3 07:39 (90) 19:38		20:16	20:51
23	07:53	08:17 (89) 07:14	07:34 (90) 07:24		06:29	05:50
	17:21	15 08:32 (89) 18:03	5 07:39 (90) 19:39		20:17	20:52
24	07:52	08:19 (89) 07:12	07:33 (90) 07:22		06:27	05:50
	17:22	14 08:33 (89) 18:04	6 07:39 (90) 19:40		20:19	20:53
25	07:51	08:21 (89) 07:10	07:31 (90) 07:20		06:26	05:49
	17:24	11 08:32 (89) 18:05	7 07:38 (90) 19:42		20:20	20:54
26	07:50	08:23 (89) 07:09	07:29 (90) 07:18		06:24	05:48
	17:25	7 08:30 (89) 18:07	14 07:43 (88) 19:43		20:21	20:55
27	07:49	07:07	07:28 (90) 07:17		06:23	05:47
	17:27	18:08	18 07:46 (88) 19:44		20:22	20:56
28	07:48	07:05	07:26 (90) 07:15		06:21	05:47
	17:28	18:10	22 07:48 (88) 19:45		20:24	20:57
29	07:47		07:13		06:20	05:46
	17:29		19:47		20:25	20:58
30	07:46		07:11		06:18	05:45
	17:31		19:48		20:26	20:59
31	07:45		07:09			05:45
	17:32		19:49			21:00
Potential sun hours	288	292	369	403	458	464
Total, worst case	215	76	673			
Sun reduction	0.57	0.59	0.59			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.69	0.62	0.62			
Total reduction	0.39	0.36	0.36			
Total, real	83	27	243			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H360 - H360

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:44	06:11	06:47	07:22	07:53 (88)	07:01	07:40	08:06 (89)
	21:13	20:52	20:04	19:09	37 08:30 (88)	17:15	16:47	7 08:13 (89)
2	05:45	06:12	06:48	07:23	07:52 (88)	07:03	07:41	08:07 (89)
	21:13	20:51	20:03	19:07	38 08:30 (88)	17:14	16:47	6 08:13 (89)
3	05:45	06:13	06:49	07:24	07:51 (88)	07:04	07:43	08:08 (89)
	21:13	20:50	20:01	19:05	39 08:30 (88)	17:13	16:46	5 08:13 (89)
4	05:46	06:15	06:50	07:26	07:52 (88)	07:05	07:44	08:09 (89)
	21:13	20:48	19:59	19:03	38 08:30 (88)	17:11	16:46	4 08:13 (89)
5	05:46	06:16	06:52	07:27	07:51 (88)	07:07	07:45	08:10 (89)
	21:13	20:47	19:57	19:01	39 08:30 (88)	17:10	16:46	3 08:13 (89)
6	05:47	06:17	06:53	07:28	07:51 (88)	07:08	07:46	08:11 (89)
	21:12	20:46	19:55	19:00	38 08:29 (88)	17:09	16:46	2 08:13 (89)
7	05:48	06:18	06:54	07:29	07:50 (88)	07:09	07:47	08:12 (89)
	21:12	20:44	19:54	18:56	38 08:28 (88)	17:07	16:46	1 08:13 (89)
8	05:48	06:19	06:55	07:30	07:52 (88)	07:11	07:48	
	21:12	20:43	19:52	18:54	36 08:28 (88)	17:06	16:45	
9	05:49	06:20	06:56	07:32	07:53 (88)	07:12	07:49	
	21:11	20:42	19:50	18:52	34 08:27 (88)	17:05	16:45	
10	05:50	06:21	06:57	07:33	07:54 (88)	07:14	07:50	
	21:11	20:40	19:48	18:51	32 08:26 (88)	17:04	16:45	
11	05:51	06:22	06:58	07:34	07:55 (88)	07:15	07:51	
	21:10	20:39	19:46	18:49	29 08:24 (88)	17:03	16:45	
12	05:51	06:24	07:00	07:35	07:57 (88)	07:16	07:51	
	21:10	20:37	19:44	18:47	26 08:23 (88)	17:02	16:45	
13	05:52	06:25	07:01	07:37	07:58 (88)	07:18	07:52	
	21:09	20:36	19:43	18:45	23 08:21 (88)	17:00	16:46	
14	05:53	06:26	07:02	07:38	07:59 (90)	07:19	07:53	
	21:09	20:34	19:41	18:44	20 08:19 (88)	16:59	16:46	
15	05:54	06:27	07:03	07:39	08:01 (90)	07:20	07:54	
	21:08	20:33	19:39	18:42	16 08:17 (88)	16:58	16:46	
16	05:55	06:28	07:04	07:40	08:02 (90)	07:22	07:56 (89)	07:55
	21:07	20:31	19:37	18:40	12 08:14 (88)	16:57	7 08:03 (89)	16:46
17	05:56	06:29	07:05	07:42	08:03 (90)	07:23	07:53 (89)	07:55
	21:07	20:30	19:35	18:39	7 08:10 (90)	16:56	12 08:05 (89)	16:46
18	05:57	06:31	07:07	07:43	08:05 (90)	07:24	07:52 (89)	07:56
	21:06	20:28	19:33	18:37	6 08:11 (90)	16:56	14 08:06 (89)	16:47
19	05:58	06:32	07:08	07:44	08:06 (90)	07:26	07:52 (89)	07:57
	21:05	20:27	19:31	18:35	4 08:10 (90)	16:55	15 08:07 (89)	16:47
20	05:59	06:33	07:09	07:46	08:07 (90)	07:27	07:51 (89)	07:57
	21:04	20:25	19:29	18:34	2 08:09 (90)	16:54	17 08:08 (89)	16:48
21	06:00	06:34	07:10	07:47	07:28	07:28	07:53 (89)	07:58
	21:03	20:23	19:28	18:32	16:53	16 08:09 (89)	16:48	
22	06:01	06:35	07:11	07:48	07:29	07:29	07:54 (89)	07:58
	21:03	20:22	19:26	10 08:09 (88)	18:30	16:52	16 08:10 (89)	16:48
23	06:02	06:36	07:12	07:49	07:31	07:31	07:55 (89)	07:59
	21:02	20:20	19:24	17 08:05 (88)	18:29	16:52	15 08:10 (89)	16:49
24	06:03	06:38	07:14	07:51	07:32	07:32	07:57 (89)	07:59
	21:01	20:18	19:22	22 08:03 (88)	18:27	16:51	14 08:11 (89)	16:50
25	06:04	06:39	07:15	07:52	07:33	07:33	07:58 (89)	08:00
	21:00	20:17	19:20	27 08:00 (88)	18:26	16:50	13 08:11 (89)	16:50
26	06:05	06:40	07:16	07:53	07:34	07:34	07:59 (89)	08:00
	20:59	20:15	19:18	30 08:28 (88)	18:24	16:50	12 08:11 (89)	16:51
27	06:06	06:41	07:17	07:55	07:36	07:36	08:01 (89)	08:00
	20:58	20:13	19:16	31 08:28 (88)	18:23	16:49	11 08:12 (89)	16:52
28	06:07	06:42	07:18	07:56	07:37	07:37	08:02 (89)	08:01
	20:57	20:11	19:14	34 08:29 (88)	18:21	16:49	10 08:12 (89)	16:52
29	06:08	06:43	07:20	07:57	07:38	07:38	08:03 (89)	08:01
	20:56	20:10	19:13	35 08:30 (88)	18:20	16:48	9 08:12 (89)	16:53
30	06:09	06:45	07:21	07:58	07:39	07:39	08:04 (89)	08:01
	20:54	20:08	19:11	36 08:30 (88)	18:18	16:48	8 08:12 (89)	16:54
31	06:10	06:46		08:00			08:01	
	20:53	20:06		18:17			16:55	
Potential sun hours	470	435	377	341	289	276		
Total, worst case			242	514	189	28		
Sun reduction			0.69	0.63	0.50	0.49		
Oper. time red.			0.98	0.98	0.98	0.98		
Wind dir. red.			0.62	0.62	0.69	0.69		
Total reduction			0.42	0.38	0.34	0.33		
Total, real			102	198	64	9		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H361 - H361

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June				
1	08:01	15:30 (87)	07:44	07:04	07:24 (91)	07:07	06:17	06:39 (89)	05:44	
	16:56	37 16:07 (87)	17:34	18:11	20 07:44 (91)	19:50	20:27	35 07:14 (89)	21:01	
2	08:01	15:30 (87)	07:43	07:02	07:22 (91)	07:06	06:15	06:38 (89)	05:44	
	16:57	37 16:07 (87)	17:35	18:12	21 07:43 (91)	19:52	20:28	35 07:13 (89)	21:02	
3	08:01	15:31 (87)	07:42	07:00	07:21 (91)	07:04	06:14	06:38 (89)	05:43	
	16:58	37 16:08 (87)	17:36	18:14	22 07:43 (91)	19:53	20:30	35 07:13 (89)	21:03	
4	08:01	15:31 (87)	07:41	06:58	07:22 (91)	07:02	06:12	06:39 (89)	05:43	
	16:59	36 16:07 (87)	17:38	18:15	20 07:42 (91)	19:54	20:31	34 07:13 (89)	21:03	
5	08:01	15:32 (87)	07:40	06:57	07:22 (91)	07:00	06:11	06:38 (89)	05:42	
	17:00	35 16:07 (87)	17:39	18:16	18 07:40 (91)	19:55	20:32	34 07:12 (89)	21:04	
6	08:01	15:33 (87)	07:38	06:55	07:23 (91)	06:58	06:10	06:39 (89)	05:42	
	17:01	35 16:08 (87)	17:41	18:17	15 07:38 (91)	19:56	20:33	33 07:12 (89)	21:05	
7	08:01	15:34 (87)	07:37	06:53	07:25 (91)	06:57	06:08	06:39 (89)	05:41	
	17:02	34 16:08 (87)	17:42	18:19	11 07:36 (91)	19:58	20:34	33 07:12 (89)	21:06	
8	08:01	15:35 (87)	07:36	07:51		06:55	06:07	06:39 (89)	05:41	
	17:03	33 16:08 (87)	17:43	18:20		19:59	20:36	31 07:10 (89)	21:06	
9	08:01	15:35 (87)	07:34	07:50		06:53	06:06	06:40 (89)	05:41	
	17:04	32 16:07 (87)	17:45	19:21		20:00	20:37	30 07:10 (89)	21:07	
10	08:00	15:36 (87)	07:33	07:48	08:08 (92)	06:51	06:04	06:26 (90)	05:41	
	17:05	32 16:08 (87)	17:46	19:23	2 08:10 (92)	20:01	20:38	31 07:09 (89)	21:08	
11	08:00	15:37 (87)	07:32	07:46	08:06 (92)	06:49	06:03	06:25 (90)	05:40	
	17:06	30 16:07 (87)	17:48	19:24	5 08:11 (92)	20:03	20:39	32 07:09 (89)	21:08	
12	08:00	15:38 (87)	07:30	07:44	08:04 (92)	06:48	06:02	06:24 (90)	05:40	
	17:07	29 16:07 (87)	17:49	19:25	7 08:11 (92)	20:04	20:40	32 07:08 (89)	21:09	
13	07:59	15:40 (87)	07:29	07:42	08:03 (92)	06:46	06:01	06:23 (90)	05:40	
	17:08	27 16:07 (87)	17:50	19:27	8 08:11 (92)	20:05	20:41	31 07:07 (89)	21:09	
14	07:59	15:41 (87)	07:27	07:41	08:01 (92)	06:44	06:00	06:21 (90)	05:40	
	17:10	25 16:06 (87)	17:52	19:28	10 08:11 (92)	20:06	20:43	31 07:05 (89)	21:10	
15	07:58	15:42 (87)	07:26	07:39	07:59 (92)	06:42	05:58	06:20 (90)	05:40	
	17:11	23 16:05 (87)	17:53	19:29	11 08:10 (92)	20:08	20:44	28 07:03 (89)	21:10	
16	07:58	15:44 (87)	07:24	07:37	07:57 (92)	06:41	05:57	06:19 (90)	05:40	
	17:12	21 16:05 (87)	17:55	19:30	12 08:09 (92)	20:09	20:45	25 07:01 (89)	21:11	
17	07:57	15:45 (87)	07:23	07:35	07:55 (92)	06:39	05:56	06:18 (90)	05:40	
	17:13	19 16:04 (87)	17:56	19:32	12 08:07 (92)	20:10	20:46	20 06:58 (89)	21:11	
18	07:57	15:47 (87)	07:21	07:33	07:57 (92)	06:37	05:55	06:17 (90)	05:40	
	17:15	15 16:02 (87)	17:57	19:33	7 08:04 (92)	20:11	20:47	14 06:31 (90)	21:12	
19	07:56	15:52 (87)	07:20	07:31	06:36	06:36 (89)	05:54	06:17 (90)	05:40	
	17:16	8 16:00 (87)	17:59	19:34	20:12	8 07:04 (89)	20:48	15 06:32 (90)	21:12	
20	07:55		07:18	07:30	06:34	06:54 (89)	05:53	06:16 (90)	05:40	
	17:17		18:00	19:35	20:14	12 07:06 (89)	20:49	16 06:32 (90)	21:12	
21	07:54		07:17	07:28	06:32	06:53 (89)	05:52	06:15 (90)	05:40	
	17:18		18:00	19:37	20:15	16 07:09 (89)	20:50	17 06:32 (90)	21:13	
22	07:54		07:15	07:26	06:31	06:51 (89)	05:51	06:14 (90)	05:41	
	17:20		18:01	4 07:40 (91)	19:38	20:16	19 07:10 (89)	20:51	17 06:31 (90)	21:13
23	07:53		07:14	07:24	06:29	06:50 (89)	05:51	06:13 (90)	05:41	
	17:21		18:03	7 07:41 (91)	19:39	20:17	21 07:11 (89)	20:52	18 06:31 (90)	21:13
24	07:52		07:12	07:22	06:27	06:48 (89)	05:50	06:12 (90)	05:41	
	17:22		18:04	10 07:43 (91)	19:40	20:19	24 07:12 (89)	20:53	18 06:30 (90)	21:13
25	07:51		07:10	07:20	06:26	06:46 (89)	05:49	06:13 (90)	05:41	
	17:24		18:05	12 07:43 (91)	19:42	20:20	26 07:12 (89)	20:54	17 06:30 (90)	21:13
26	07:50		07:09	07:18	06:24	06:45 (89)	05:48	06:14 (90)	05:42	
	17:25		18:07	15 07:44 (91)	19:43	20:21	28 07:13 (89)	20:55	15 06:29 (90)	21:13
27	07:49		07:07	07:17	06:23	06:43 (89)	05:47	06:14 (90)	05:42	
	17:27		18:08	16 07:44 (91)	19:44	20:22	30 07:13 (89)	20:56	14 06:28 (90)	21:14
28	07:48		07:05	07:15	06:21	06:42 (89)	05:47	06:16 (90)	05:43	
	17:28		18:10	18 07:44 (91)	19:45	20:24	32 07:14 (89)	20:57	12 06:28 (90)	21:14
29	07:47			07:13	06:20	06:41 (89)	05:46	06:17 (90)	05:43	
	17:29			19:47	20:25	33 07:14 (89)	20:58	10 06:27 (90)	21:14	
30	07:46			07:11	06:18	06:39 (89)	05:45	06:18 (90)	05:44	
	17:31			19:48	20:26	35 07:14 (89)	20:59	7 06:25 (90)	21:13	
31	07:45			07:09			05:45	06:21 (90)		
	17:32			19:49			21:00	3 06:24 (90)		
Potential sun hours	288	292	369	403	458	464				
Total, worst case	545	82	201	284	723					
Sun reduction	0.57	0.59	0.59	0.61	0.65					
Oper. time red.	0.98	0.98	0.98	0.98	0.98					
Wind dir. red.	0.56	0.62	0.62	0.54	0.55					
Total reduction	0.31	0.36	0.36	0.32	0.35					
Total, real	171	30	72	92	251					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H361 - H361

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December					
1	05:44	06:11	06:35 (90)	06:47	07:22	07:43 (92)	07:01	07:40	15:19 (87)		
	21:13	20:52	32 07:19 (89)	20:04	19:09	7 07:50 (92)	17:15	16:47	30 15:49 (87)		
2	05:45	06:12	06:36 (90)	06:48	07:23	07:44 (92)	07:03	07:41	15:19 (87)		
	21:13	20:51	32 07:20 (89)	20:03	19:07	6 07:50 (92)	17:14	16:47	32 15:51 (87)		
3	05:45	06:13	06:37 (90)	06:49	07:24	07:45 (92)	07:04	07:43	15:19 (87)		
	21:13	20:50	31 07:20 (89)	20:01	19:05	3 07:48 (92)	17:13	16:46	32 15:51 (87)		
4	05:46	06:15	06:50 (89)	06:50	07:26	07:47 (92)	07:05	07:44	15:19 (87)		
	21:13	20:48	31 07:21 (89)	19:59	19:03	1 07:48 (92)	17:11	16:46	33 15:52 (87)		
5	05:46	06:16	06:50 (89)	06:52	07:27		07:07	07:45	15:19 (87)		
	21:13	20:47	31 07:21 (89)	19:57	19:01		17:10	16:46	34 15:53 (87)		
6	05:47	06:17	06:49 (89)	06:53	07:28	08:04 (91)	07:08	07:46	15:19 (87)		
	21:12	20:46	33 07:22 (89)	19:55	19:00	7 08:11 (91)	17:09	16:46	35 15:54 (87)		
7	05:48	06:18	06:48 (89)	06:54	07:29	08:00 (91)	07:09	07:47	15:19 (87)		
	21:12	20:44	34 07:22 (89)	19:54	18:56	13 08:13 (91)	17:07	16:46	35 15:54 (87)		
8	05:48	06:19	06:48 (89)	06:55	07:30	07:59 (91)	07:11	07:48	15:19 (87)		
	21:12	20:43	34 07:22 (89)	19:52	18:54	16 08:15 (91)	17:06	16:46	36 15:55 (87)		
9	05:49	06:20	06:47 (89)	06:56	07:32	07:57 (91)	07:12	07:49	15:19 (87)		
	21:11	20:42	35 07:22 (89)	19:50	18:52	19 08:16 (91)	17:05	16:45	37 15:56 (87)		
10	05:50	06:21	06:47 (89)	06:57	07:33	07:56 (91)	07:14	07:50	15:19 (87)		
	21:11	20:40	35 07:22 (89)	19:48	18:51	21 08:17 (91)	17:04	16:45	37 15:56 (87)		
11	05:51	06:22	06:47 (89)	06:58	07:34	07:55 (91)	07:15	07:50	15:20 (87)		
	21:10	20:39	35 07:22 (89)	19:46	18:49	22 08:17 (91)	17:03	16:45	37 15:57 (87)		
12	05:51	06:24	06:46 (89)	07:00	07:35	07:57 (91)	07:16	07:51	15:20 (87)		
	21:10	20:37	36 07:22 (89)	19:44	18:47	20 08:17 (91)	17:02	16:45	38 15:58 (87)		
13	05:52	06:27 (90)	06:25	06:48 (89)	07:01	07:37	07:58 (91)	07:52	15:20 (87)		
	21:09	6 06:33 (90)	20:36	34 07:22 (89)	19:42	18:45	19 08:17 (91)	17:00	16:46	38 15:58 (87)	
14	05:53	06:25 (90)	06:26	06:49 (89)	07:02	07:38	07:59 (91)	07:19	07:53	15:20 (87)	
	21:09	10 06:35 (90)	20:34	33 07:22 (89)	19:41	18:44	17 08:16 (91)	16:59	16:46	38 15:58 (87)	
15	05:54	06:25 (90)	06:27	06:50 (89)	07:03	07:39	08:01 (91)	07:20	07:54	15:21 (87)	
	21:08	11 06:36 (90)	20:33	31 07:21 (89)	19:39	18:42	16 08:17 (91)	16:58	16:46	38 15:59 (87)	
16	05:55	06:24 (90)	06:28	06:51 (89)	07:04	07:40	08:02 (91)	07:22	07:55	15:21 (87)	
	21:07	13 06:37 (90)	20:31	29 07:20 (89)	19:37	18:40	14 08:16 (91)	16:57	16:46	39 16:00 (87)	
17	05:56	06:23 (90)	06:29	06:52 (89)	07:05	07:42	08:03 (91)	07:23	07:55	15:22 (87)	
	21:07	15 06:38 (90)	20:30	28 07:20 (89)	19:35	18:39	11 08:14 (91)	16:56	16:46	39 16:01 (87)	
18	05:57	06:23 (90)	06:31	06:53 (89)	07:07	07:43	08:05 (91)	07:24	07:56	15:22 (87)	
	21:06	16 06:39 (90)	20:28	26 07:19 (89)	19:33	18:37	9 08:14 (91)	16:56	16:47	39 16:01 (87)	
19	05:58	06:22 (90)	06:32	06:54 (89)	07:08	07:44	08:06 (91)	07:25	07:57	15:22 (87)	
	21:05	18 06:40 (90)	20:26	23 07:17 (89)	19:31	18:35	6 08:12 (91)	16:55	16:47	39 16:01 (87)	
20	05:59	06:23 (90)	06:33	06:55 (89)	07:09	07:46	08:07 (91)	07:27	07:57	15:22 (87)	
	21:04	18 06:41 (90)	20:25	21 07:16 (89)	19:29	18:34	3 08:10 (91)	16:54	16:48	39 16:01 (87)	
21	06:00	06:23 (90)	06:34	06:56 (89)	07:10	07:47		07:28	07:58	15:23 (87)	
	21:03	17 06:40 (90)	20:23	18 07:14 (89)	19:28	18:32		16:53	16:48	39 16:02 (87)	
22	06:01	06:24 (90)	06:35	06:58 (89)	07:11	07:48		07:29	07:58	15:23 (87)	
	21:03	17 06:41 (90)	20:22	15 07:13 (89)	19:26	18:30		16:52	16:48	39 16:02 (87)	
23	06:02	06:25 (90)	06:36	06:59 (89)	07:12	07:49		07:31	07:59	15:24 (87)	
	21:02	16 06:41 (90)	20:20	12 07:11 (89)	19:24	18:29		16:52	8 15:36 (87)	16:49	39 16:03 (87)
24	06:03	06:26 (90)	06:38	07:00 (89)	07:14	07:51		07:32	15:26 (87)	07:59	15:24 (87)
	21:01	16 06:42 (90)	20:18	7 07:07 (89)	19:22	18:27		16:51	14 15:40 (87)	16:50	39 16:03 (87)
25	06:04	06:27 (90)	06:39		07:15	07:52		07:33	15:24 (87)	08:00	15:26 (87)
	21:00	15 06:42 (90)	20:17		19:20	4 07:46 (92)	18:26	16:50	18 15:42 (87)	16:50	39 16:05 (87)
26	06:05	06:28 (90)	06:40		07:16	07:38 (92)	07:53	07:34	15:22 (87)	08:00	15:26 (87)
	20:59	14 06:42 (90)	20:15		19:18	11 07:49 (92)	18:24	16:50	21 15:43 (87)	16:51	39 16:05 (87)
27	06:06	06:29 (90)	06:41		07:17	07:38 (92)	07:55	07:36	15:22 (87)	08:00	15:26 (87)
	20:58	23 07:10 (89)	20:13		19:16	12 07:50 (92)	18:23	16:49	23 15:45 (87)	16:52	39 16:05 (87)
28	06:07	06:30 (90)	06:42		07:18	07:39 (92)	07:56	07:37	15:21 (87)	08:01	15:26 (87)
	20:57	27 07:13 (89)	20:11		19:14	11 07:50 (92)	18:21	16:49	25 15:46 (87)	16:52	39 16:05 (87)
29	06:08	06:31 (90)	06:43		07:20	07:40 (92)	07:57	07:38	15:20 (87)	08:01	15:27 (87)
	20:55	29 07:14 (89)	20:10		19:13	10 07:50 (92)	18:20	16:48	27 15:47 (87)	16:53	38 16:05 (87)
30	06:09	06:32 (90)	06:45		07:21	07:42 (92)	07:59	07:39	15:19 (87)	08:01	15:28 (87)
	20:54	31 07:16 (89)	20:08		19:11	9 07:51 (92)	18:18	16:48	29 15:48 (87)	16:54	38 16:06 (87)
31	06:10	06:33 (90)	06:46				08:00			08:01	15:29 (87)
	20:53	32 07:17 (89)	20:06				18:17			16:55	38 16:07 (87)
Potential sun hours	470	435		377	341		289		276		1151
Total, worst case	344	676		57	230		165				0.49
Sun reduction	0.76	0.74		0.69	0.63		0.50				0.98
Oper. time red.	0.98	0.98		0.98	0.98		0.98				0.56
Wind dir. red.	0.55	0.54		0.61	0.62		0.56				0.27
Total reduction	0.41	0.39		0.41	0.38		0.27				0.27
Total, real	141	264		24	89		45				310

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H362 - H362

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:01	07:44	08:24 (95)	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40	08:06 (95)
	16:56	17:34	8 08:32 (95)	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47	4 08:10 (95)
2	08:01	07:43		07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41	08:07 (95)
	16:57	17:35		18:12	19:52	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47	1 08:08 (95)
3	08:01	07:42		07:00	07:04	06:14	05:43	05:45	06:14	06:49	07:24	07:04	07:43	
	16:58	17:36		18:14	19:53	20:30	21:03	21:13	20:50	20:01	19:05	17:13	16:47	
4	08:01	07:41		06:58	07:02	06:13	05:43	05:46	06:15	06:50	07:26	07:06	07:44	
	16:59	17:38		18:15	19:54	20:31	21:04	21:13	20:48	19:59	19:03	17:11	16:46	
5	08:01	07:40		06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45	
	17:00	17:39		18:16	19:55	20:32	21:04	21:13	20:47	19:57	19:02	17:10	16:46	
6	08:01	07:38		06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46	
	17:01	17:41		18:18	19:57	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46	
7	08:01	07:37		06:53	06:57	06:08	05:41	05:48	06:18	06:54	07:29	07:10	07:47	
	17:02	17:42		18:19	19:58	20:34	21:06	21:12	20:44	19:54	18:56	17:07	16:46	
8	08:01	07:36		07:51	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48	
	17:03	17:43		18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:46	
9	08:01	07:34		07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49	
	17:04	17:45		19:21	20:00	20:37	21:07	21:11	20:42	19:50	18:53	17:05	16:46	
10	08:00	08:24 (95)	07:33	07:48	06:51	06:05	05:41	05:50	06:21	06:57	07:33	07:14		07:54 (95)
	17:05	1 08:25 (95)	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	9 08:03 (95)	16:46
11	08:00	08:24 (95)	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:34	07:15		07:53 (95)
	17:06	3 08:27 (95)	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	13 08:06 (95)	16:46
12	08:00	08:23 (95)	07:30	07:44	06:48	06:02	05:40	05:52	06:24	07:00	07:35	07:16		07:51 (95)
	17:07	5 08:28 (95)	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16 08:07 (95)	16:46
13	07:59	08:23 (95)	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18		07:50 (95)
	17:08	7 08:30 (95)	17:50	19:27	20:05	20:42	21:10	21:09	20:36	19:43	18:46	17:01	17 08:07 (95)	16:46
14	07:59	08:22 (95)	07:27	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19		07:50 (95)
	17:10	9 08:31 (95)	17:52	19:28	20:06	20:43	21:10	21:09	20:34	19:41	18:44	17:00	19 08:09 (95)	16:46
15	07:58	08:21 (95)	07:26	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:39	07:20		07:49 (95)
	17:11	10 08:31 (95)	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	20 08:09 (95)	16:46
16	07:58	08:21 (95)	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:04	07:41	07:22		07:49 (95)
	17:12	12 08:33 (95)	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:58	21 08:10 (95)	16:46
17	07:57	08:20 (95)	07:23	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:23		07:49 (95)
	17:13	14 08:34 (95)	17:56	19:32	20:10	20:46	21:11	21:07	20:30	19:35	18:39	16:57	21 08:10 (95)	16:47
18	07:57	08:20 (95)	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24		07:50 (95)
	17:15	15 08:35 (95)	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	21 08:11 (95)	16:47
19	07:56	08:19 (95)	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:26		07:50 (95)
	17:16	16 08:35 (95)	17:59	19:34	20:13	20:48	21:12	21:05	20:27	19:31	18:35	16:55	21 08:11 (95)	16:47
20	07:55	08:18 (95)	07:18	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27		07:51 (95)
	17:17	18 08:36 (95)	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	20 08:11 (95)	16:48
21	07:55	08:17 (95)	07:17	07:28	06:32	05:52	05:41	06:00	06:34	07:10	07:47	07:28		07:52 (95)
	17:19	19 08:36 (95)	18:00	19:37	20:15	20:50	21:13	21:03	20:23	19:28	18:32	16:53	19 08:12 (95)	16:48
22	07:54	08:16 (95)	07:15	07:26	06:31	05:52	05:41	06:01	06:35	07:11	07:48	07:29		07:54 (95)
	17:20	20 08:36 (95)	18:02	19:38	20:16	20:51	21:13	21:03	20:22	19:26	18:30	16:52	18 08:12 (95)	16:49
23	07:53	08:15 (95)	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31		07:55 (95)
	17:21	21 08:36 (95)	18:03	19:39	20:17	20:53	21:13	21:02	20:20	19:24	18:29	16:52	16 08:11 (95)	16:49
24	07:52	08:16 (95)	07:12	07:22	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:32		07:57 (95)
	17:23	21 08:37 (95)	18:04	19:40	20:19	20:54	21:13	21:01	20:18	19:22	18:27	16:51	15 08:12 (95)	16:50
25	07:51	08:16 (95)	07:10	07:20	06:26	05:49	05:42	06:04	06:39	07:15	07:52	07:33		07:58 (95)
	17:24	22 08:38 (95)	18:06	19:42	20:20	20:55	21:13	21:00	20:17	19:20	18:26	16:50	14 08:12 (95)	16:50
26	07:50	08:16 (95)	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34		07:59 (95)
	17:25	21 08:37 (95)	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:50	12 08:11 (95)	16:51
27	07:49	08:17 (95)	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36		08:01 (95)
	17:27	20 08:37 (95)	18:08	19:44	20:22	20:56	21:14	20:58	20:13	19:16	18:23	16:49	11 08:12 (95)	16:52
28	07:48	08:18 (95)	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37		08:02 (95)
	17:28	19 08:37 (95)	18:10	19:45	20:24	20:57	21:14	20:57	20:12	19:14	18:21	16:49	9 08:11 (95)	16:52
29	07:47	08:19 (95)		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:57	07:38		08:03 (95)
	17:29	17 08:36 (95)		19:47	20:25	20:58	21:14	20:56	20:10	19:13	18:20	16:48	7 08:10 (95)	16:53
30	07:46	08:19 (95)		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39		08:04 (95)
	17:31	16 08:35 (95)		19:48	20:26	20:59	21:14	20:54	20:08	19:11	18:18	16:48	6 08:10 (95)	16:54
31	07:45	08:21 (95)		07:09	05:45	05:45	06:10	06:46	06:46	07:22	08:00			08:01
	17:32	13 08:34 (95)		19:49	20:27	21:00	20:53	20:06	20:06	18:17	18:17	16:55		16:55
Potential sun hours	288													276
Total, worst case	319		8								325			5
Sun reduction	0.57		0.59								0.50			0.49
Oper. time red.	0.98		0.98								0.98			0.98
Wind dir. red.	0.69		0.69								0.69			0.69
Total reduction	0.38		0.40								0.34			0.33
Total, real	123		3								110			2

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H363 - H363

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:01	07:44	07:03	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:01	07:40
	16:56	17:34	18:11	19:50	20:27	21:01	21:13	20:52	20:04	19:09	17:15	16:47
2	08:01	07:43	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:23	07:03	07:41
	16:57	17:35	18:12	19:51	20:28	21:02	21:13	20:51	20:03	19:07	17:14	16:47
3	08:01	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:42
	16:58	17:36	18:13	19:53	20:29	21:03	21:13	20:49	20:01	19:05	17:13	16:46
4	08:01	07:41	06:58	07:02	06:12	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:59	17:38	18:15	19:54	20:31	21:03	21:13	20:48	19:59	19:03	17:11	16:46
5	08:01	07:39	06:57	07:00	06:11	05:42	05:46	06:16	06:51	07:27	07:07	07:45
	17:00	17:39	18:16	19:55	20:32	21:04	21:12	20:47	19:57	19:01	17:10	16:46
6	08:01	07:38	06:55	06:58	06:10	05:42	05:47	06:17	06:53	07:28	07:08	07:46
	17:01	17:41	18:17	19:56	20:33	21:05	21:12	20:46	19:55	19:00	17:09	16:46
7	08:01	07:37	06:53	06:56	06:08	05:41	05:48	06:18	06:54	07:29	07:09	07:47
	17:02	17:42	18:19	19:58	20:34	21:06	21:12	20:44	19:53	18:56	17:07	16:46
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:30	07:11	07:48
	17:03	17:43	18:20	19:59	20:35	21:06	21:11	20:43	19:52	18:54	17:06	16:46
9	08:00	07:34	07:49	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:12	07:49
	17:04	17:45	19:21	20:00	20:37	21:07	21:11	20:41	19:50	18:52	17:05	16:45
10	08:00	07:33	07:48	06:51	06:04	05:41	05:50	06:21	06:57	07:33	07:13	07:49
	17:05	17:46	19:23	20:01	20:38	21:08	21:11	20:40	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:51	06:22	06:58	07:34	07:15	07:50
	17:06	17:48	19:24	20:03	20:39	21:08	21:10	20:39	19:46	18:49	17:03	16:45
12	07:59	07:30	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:35	07:16	07:51
	17:07	17:49	19:25	20:04	20:40	21:09	21:10	20:37	19:44	18:47	17:02	16:46
13	07:59	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:17	07:52
	17:08	17:50	19:26	20:05	20:41	21:09	21:09	20:36	19:42	18:45	17:00	16:46
14	07:59	07:27	07:40	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:53
	17:10	17:52	19:28	20:06	20:42	21:10	21:08	20:34	19:41	18:44	16:59	16:46
15	07:58	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:20	07:54
	17:11	17:53	19:29	20:07	20:44	21:10	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:24	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:40	07:21	07:54
	17:12	17:55	19:30	20:09	20:45	21:11	21:07	20:31	19:37	18:40	16:57	16:46
17	07:57	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:05	07:42	07:23	07:55
	17:13	17:56	19:32	20:10	20:46	21:11	21:06	20:30	19:35	18:39	16:56	16:46
18	07:56	07:21	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:24	07:56
	17:15	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:56	16:47
19	07:56	07:20	07:31	06:36	05:54	05:40	05:58	06:32	07:08	07:44	07:25	07:56
	17:16	17:59	19:34	20:12	20:48	21:12	21:05	20:26	19:31	18:35	16:55	16:47
20	07:55	07:18	07:29	06:34	05:53	05:40	05:59	06:33	07:09	07:45	07:27	07:57
	17:17	18:00	19:35	20:14	20:49	21:12	21:04	20:25	19:29	18:34	16:54	16:48
21	07:54	07:17	07:28	06:32	05:52	05:40	06:00	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:50	21:12	21:03	20:23	19:27	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:41	06:01	06:35	07:11	07:48	07:29	07:58
	17:20	18:01	19:38	20:16	20:51	21:13	21:02	20:21	19:26	18:30	16:52	16:49
23	07:53	07:13	07:24	06:29	05:51	05:41	06:02	06:36	07:12	07:49	07:30	07:59
	17:21	18:03	19:39	20:17	20:52	21:13	21:01	20:20	19:24	18:29	16:52	16:49
24	07:52	07:12	07:22	06:27	05:50	05:41	06:03	06:38	07:14	07:51	07:32	07:59
	17:22	18:04	19:40	20:19	20:53	21:13	21:01	20:18	19:22	18:27	16:51	16:50
25	07:51	07:10	07:20	06:26	05:49	05:41	06:04	06:39	07:15	07:52	07:33	07:59
	17:24	18:05	19:42	20:20	20:54	21:13	21:00	20:16	19:20	18:26	16:50	16:50
26	07:50	07:08	07:18	06:24	05:48	05:42	06:05	06:40	07:16	07:53	07:34	08:00
	17:25	18:07	19:43	20:21	20:55	21:13	20:59	20:15	19:18	18:24	16:50	16:51
27	07:49	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:35	08:00
	17:27	18:08	19:44	20:22	20:56	21:13	20:57	20:13	19:16	18:23	16:49	16:52
28	07:48	07:05	07:15	06:21	05:47	05:43	06:07	06:42	07:18	07:56	07:37	08:00
	17:28	18:09	19:45	20:23	20:57	21:13	20:56	20:11	19:14	18:21	16:49	16:52
29	07:47		07:13	06:20	05:46	05:43	06:08	06:43	07:19	07:57	07:38	08:01
	17:29		19:47	20:25	20:58	21:13	20:55	20:10	19:12	18:20	16:48	16:53
30	07:46		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:39	08:01
	17:31		19:48	20:26	20:59	21:13	20:54	20:08	19:11	18:18	16:48	16:54
31	07:45		07:09		05:45		06:10	06:46		08:00		08:01
	17:32		19:49		21:00		20:53	20:06		18:17		16:55
Potential sun hours	288	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H364 - H364

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H365 - H365

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:34	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H366 - H366

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:29	19:33	18:37	16:55	16:46
19	07:56	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:16	18:22	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:56	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H367 - H367

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:46	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:02
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H368 - H368

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:46	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:02
	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H369 - H369

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:28	21:02	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:17	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:02	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:38	21:08	21:11	20:41	19:48	18:51	17:04	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:10	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:39	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:12	20:48	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:20	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:24	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:23	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:07	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:46	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H370 - H370

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:40	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:31	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H371 - H371

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:07	06:16	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:50	20:27	21:01	21:14	20:52	20:05	19:09	17:15	16:47
2	08:02	07:43	07:02	07:05	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:46
3	08:02	07:42	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:24	07:04	07:43
	16:57	17:36	18:13	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:58	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:37	18:15	19:54	20:31	21:04	21:13	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:51	07:27	07:07	07:45
	16:59	17:39	18:16	19:55	20:32	21:05	21:13	20:47	19:57	19:01	17:10	16:46
6	08:02	07:39	06:55	06:58	06:09	05:41	05:47	06:16	06:53	07:28	07:08	07:46
	17:00	17:40	18:17	19:57	20:34	21:05	21:13	20:46	19:56	19:00	17:08	16:45
7	08:01	07:37	06:53	06:56	06:08	05:41	05:47	06:18	06:54	07:29	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:06	21:12	20:45	19:54	18:56	17:07	16:45
8	08:01	07:36	07:51	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:43	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:05	05:40	05:49	06:20	06:56	07:32	07:12	07:49
	17:03	17:45	19:21	20:00	20:37	21:08	21:12	20:42	19:50	18:52	17:05	16:45
10	08:01	07:33	07:48	06:51	06:04	05:40	05:49	06:21	06:57	07:33	07:14	07:50
	17:04	17:46	19:23	20:02	20:38	21:08	21:11	20:40	19:48	18:51	17:03	16:45
11	08:00	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:58	07:34	07:15	07:51
	17:06	17:47	19:24	20:03	20:39	21:09	21:11	20:39	19:46	18:49	17:02	16:45
12	08:00	07:30	07:44	06:47	06:02	05:40	05:51	06:23	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:09	21:10	20:38	19:44	18:47	17:01	16:45
13	08:00	07:29	07:42	06:46	06:00	05:40	05:52	06:24	07:01	07:37	07:18	07:53
	17:08	17:50	19:26	20:05	20:42	21:10	21:10	20:36	19:43	18:45	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:39	05:53	06:26	07:02	07:38	07:19	07:53
	17:09	17:52	19:28	20:07	20:43	21:10	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:39	05:54	06:27	07:03	07:39	07:21	07:54
	17:10	17:53	19:29	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:58	16:45
16	07:58	07:25	07:37	06:41	05:57	05:39	05:54	06:28	07:04	07:41	07:22	07:55
	17:12	17:54	19:30	20:09	20:45	21:11	21:08	20:31	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:39	05:55	06:29	07:05	07:42	07:23	07:56
	17:13	17:56	19:32	20:10	20:46	21:12	21:07	20:30	19:35	18:38	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:39	05:56	06:30	07:07	07:43	07:25	07:56
	17:14	17:57	19:33	20:11	20:47	21:12	21:06	20:28	19:33	18:37	16:55	16:46
19	07:56	07:20	07:31	06:35	05:54	05:40	05:57	06:31	07:08	07:44	07:26	07:57
	17:15	17:58	19:34	20:13	20:49	21:13	21:05	20:27	19:31	18:35	16:54	16:47
20	07:56	07:18	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:35	20:14	20:50	21:13	21:05	20:25	19:29	18:33	16:53	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:28	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:23	19:28	18:32	16:53	16:48
22	07:54	07:15	07:26	06:30	05:51	05:40	06:00	06:35	07:11	07:48	07:30	07:59
	17:19	18:01	19:38	20:16	20:52	21:13	21:03	20:22	19:26	18:30	16:52	16:48
23	07:53	07:14	07:24	06:29	05:50	05:40	06:01	06:36	07:12	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:52	07:12	07:22	06:27	05:49	05:41	06:02	06:37	07:14	07:51	07:32	08:00
	17:22	18:04	19:40	20:19	20:54	21:14	21:01	20:18	19:22	18:27	16:50	16:49
25	07:52	07:10	07:20	06:26	05:48	05:41	06:03	06:39	07:15	07:52	07:34	08:00
	17:23	18:05	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:25	16:50	16:50
26	07:51	07:09	07:18	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:00
	17:25	18:07	19:43	20:21	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:50
27	07:50	07:07	07:17	06:22	05:47	05:42	06:05	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:13	19:16	18:22	16:49	16:51
28	07:49	07:05	07:15	06:21	05:46	05:42	06:06	06:42	07:18	07:56	07:37	08:01
	17:28	18:09	19:45	20:24	20:58	21:14	20:57	20:12	19:14	18:21	16:48	16:52
29	07:48		07:13	06:19	05:45	05:43	06:08	06:43	07:20	07:58	07:38	08:01
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:19	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:44	07:21	07:59	07:40	08:01
	17:30		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:53
31	07:46		07:09		05:44		06:10	06:46		08:00		08:02
	17:32		19:49		21:01		20:54	20:06		18:16		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H372 - H372

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:48
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:49
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:26	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:59
	17:18	18:00	19:37	20:15	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:12	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	08:00
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H373 - H373

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:55	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:23	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:00	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:05	17:12	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:45	06:14	06:50	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	19:59	19:03	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:15	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:58	06:10	05:41	05:47	06:17	06:53	07:28	07:09	07:46
	17:00	17:40	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:53	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:47
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:02	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:40	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:57	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:49	06:03	05:40	05:50	06:22	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:44	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:25	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	07:59	07:28	07:41	06:44	05:59	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:45
15	07:59	07:26	07:39	06:42	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:04	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:23	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:33	06:37	05:55	05:40	05:56	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:33	18:37	16:55	16:46
19	07:57	07:20	07:32	06:36	05:54	05:40	05:57	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:58
	17:18	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:11	07:49	07:30	07:59
	17:20	18:01	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	07:59
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:27	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:20	06:26	05:49	05:41	06:03	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:41	06:04	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:26	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H374 - H374

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:33	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:15	16:47
2	08:02	07:44	07:02	07:06	06:15	05:43	05:44	06:12	06:48	07:24	07:03	07:42
	16:56	17:35	18:12	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:13	06:49	07:25	07:05	07:43
	16:57	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:05	17:13	16:46
4	08:02	07:41	06:59	07:02	06:12	05:42	05:46	06:14	06:51	07:26	07:06	07:44
	16:58	17:38	18:15	19:54	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	16:59	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:47
	17:00	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:47	06:18	06:54	07:30	07:10	07:48
	17:01	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:07	16:45
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:49
	17:03	17:43	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:54	17:06	16:45
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:04	05:40	05:50	06:21	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:48	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:50	06:22	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:47	17:01	16:45
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:50	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:00	16:45
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:09	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	16:59	16:46
15	07:59	07:27	07:39	06:43	05:58	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:58	16:46
16	07:58	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:40	16:57	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:29	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:56	16:46
18	07:57	07:22	07:34	06:37	05:55	05:40	05:57	06:31	07:07	07:43	07:25	07:57
	17:14	17:57	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:55	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:34	20:13	20:49	21:13	21:06	20:27	19:32	18:35	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:58	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:47
21	07:55	07:17	07:28	06:32	05:52	05:40	05:59	06:34	07:10	07:47	07:29	07:59
	17:18	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:51	05:40	06:00	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:30	16:52	16:48
23	07:54	07:14	07:24	06:29	05:50	05:41	06:01	06:36	07:13	07:50	07:31	08:00
	17:21	18:03	19:39	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:51	16:49
24	07:53	07:12	07:22	06:28	05:49	05:41	06:02	06:38	07:14	07:51	07:33	08:00
	17:22	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:49
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:24	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:18	18:24	16:49	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:17	07:55	07:36	08:01
	17:27	18:08	19:44	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:51
28	07:49	07:06	07:15	06:21	05:46	05:42	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:48	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:43	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:47	16:54
31	07:46		07:09		05:44		06:10	06:46		08:01		08:02
	17:32		19:49		21:01		20:54	20:07		18:17		16:54
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H375 - H375

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:45
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:43	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H376 - H376

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:31	21:04	21:14	20:51	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:18	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H377 - H377

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:36	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:21	06:58	07:33	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:48
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H378 - H378

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:02 16:56	07:45 17:34	07:04 18:11	07:35 (1) 08:01 (1)	07:08 19:51	06:17 20:28
2	08:02 16:57	07:44 17:35	07:02 18:12	07:36 (1) 08:00 (1)	07:06 19:52	06:15 20:29
3	08:02 16:58	07:43 17:36	07:01 18:14	07:37 (1) 07:58 (1)	07:04 19:53	07:24 (2) 07:29 (2)
4	08:02 16:59	07:41 17:38	06:59 18:15	07:38 (1) 07:56 (1)	07:02 19:55	07:22 (2) 07:30 (2)
5	08:02 17:00	07:40 17:39	06:57 18:16	07:41 (1) 07:54 (1)	07:00 19:56	07:21 (2) 07:31 (2)
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:59 19:57	07:19 (2) 07:31 (2)
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:57 19:58	07:17 (2) 07:31 (2)
8	08:02 17:03	07:36 17:44	07:52 18:20	06:55 19:59	06:55 19:59	07:15 (2) 07:31 (2)
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:53 20:01	07:13 (2) 07:30 (2)
10	08:01 17:05	07:34 17:46	07:48 19:23	06:51 20:02	06:51 20:02	07:13 (2) 07:30 (2)
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:50 20:03	07:13 (2) 07:29 (2)
12	08:00 17:07	07:31 17:49	07:45 19:26	06:48 20:04	06:48 20:04	07:13 (2) 07:28 (2)
13	08:00 17:08	07:30 17:51	07:43 19:27	06:46 20:06	06:46 20:06	07:14 (2) 07:25 (2)
14	08:00 17:10	07:28 17:52	07:41 19:28	06:44 20:07	06:44 20:07	07:18 (2) 07:23 (2)
15	07:59 17:11	07:27 17:53	07:48 (1) 07:56 (1)	07:39 19:29	06:43 20:08	05:59 20:45
16	07:59 17:12	07:25 17:55	07:46 (1) 07:58 (1)	07:37 19:31	06:41 20:09	05:57 20:46
17	07:58 17:13	07:24 17:56	07:45 (1) 08:00 (1)	07:35 19:32	06:39 20:11	05:56 20:47
18	07:57 17:15	07:22 17:58	07:43 (1) 08:01 (1)	07:34 19:33	06:38 20:12	05:55 20:48
19	07:57 17:16	07:20 17:59	07:41 (1) 08:01 (1)	07:32 19:35	06:36 20:13	05:54 20:49
20	07:56 17:17	07:19 18:00	07:40 (1) 08:03 (1)	07:30 19:36	06:34 20:14	05:53 20:50
21	07:55 17:19	07:17 18:00	07:38 (1) 08:03 (1)	07:28 19:37	06:33 20:16	05:52 20:51
22	07:55 17:20	07:16 18:02	07:37 (1) 08:04 (1)	07:26 19:38	06:31 20:17	05:51 20:52
23	07:54 17:21	07:14 18:03	07:35 (1) 08:04 (1)	07:24 19:40	06:29 20:18	05:51 20:53
24	07:53 17:23	07:12 18:04	07:33 (1) 08:03 (1)	07:23 19:41	06:28 20:19	05:50 20:54
25	07:52 17:24	07:11 18:06	07:34 (1) 08:04 (1)	07:21 19:42	06:26 20:21	05:49 20:55
26	07:51 17:25	07:09 18:07	07:34 (1) 08:03 (1)	07:19 19:43	06:24 20:22	05:48 20:56
27	07:50 17:27	07:07 18:08	07:34 (1) 08:02 (1)	07:17 19:45	06:23 20:23	05:47 20:57
28	07:49 17:28	07:06 18:10	07:34 (1) 08:01 (1)	07:15 19:46	06:21 20:24	05:47 20:58
29	07:48 17:29		07:13 19:47	06:20 20:25	06:20 20:25	05:46 20:59
30	07:47 17:31		07:11 19:48	06:18 20:27	06:18 20:27	05:45 21:00
31	07:46 17:32		07:10 19:50		06:18 20:27	05:45 21:01
Potential sun hours	287	292	369	403	458	465
Total, worst case		321	102	146		
Sun reduction		0.59	0.59	0.61		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.64	0.64	0.57		
Total reduction		0.37	0.37	0.34		
Total, real		118	38	50		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H378 - H378

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:44 21:14	06:11 20:53	06:47 20:05	07:12 (2) 19:09	07:22 17:15	07:41 16:47
2	05:44 21:14	06:12 20:52	06:48 20:03	07:11 (2) 19:07	07:24 17:14	07:42 16:47
3	05:45 21:14	06:13 20:50	06:49 20:01	07:11 (2) 19:06	07:25 17:13	07:43 16:46
4	05:46 21:14	06:15 20:49	06:51 20:00	07:12 (2) 19:04	07:26 17:11	07:44 16:46
5	05:46 21:13	06:16 20:48	06:52 19:58	07:13 (2) 19:02	07:27 17:10	07:46 16:46
6	05:47 21:13	06:17 20:46	06:53 19:56	07:15 (2) 19:00	07:28 17:09	07:47 16:46
7	05:48 21:13	06:18 20:45	06:54 19:54	07:16 (2) 18:56	07:30 17:07	07:48 16:46
8	05:48 21:12	06:19 20:44	06:55 19:52	07:17 (2) 18:55	07:31 08:18 (1)	07:49 17:06
9	05:49 21:12	06:20 20:42	06:56 19:50	07:18 (2) 18:53	07:32 15 08:29 (1)	07:50 17:05
10	05:50 21:12	06:21 20:41	06:58 19:49	07:33 18:51	08:12 (1) 20 08:32 (1)	07:50 17:04
11	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	08:10 (1) 23 08:33 (1)	07:51 17:03
12	05:51 21:11	06:24 20:38	07:00 19:45	07:36 18:47	08:09 (1) 24 08:33 (1)	07:52 17:02
13	05:52 21:10	06:25 20:36	07:01 19:43	07:37 18:46	08:08 (1) 27 08:35 (1)	07:53 17:01
14	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	08:07 (1) 28 08:35 (1)	07:54 16:59
15	05:54 21:09	06:27 20:33	07:03 19:39	07:40 18:42	08:06 (1) 29 08:35 (1)	07:55 16:58
16	05:55 21:08	06:28 20:32	07:05 19:37	07:41 18:41	08:06 (1) 30 08:36 (1)	07:55 16:57
17	05:56 21:07	06:30 20:30	07:06 19:35	07:42 18:39	08:05 (1) 30 08:35 (1)	07:56 16:57
18	05:57 21:07	06:31 20:29	07:07 19:34	07:44 18:37	08:05 (1) 30 08:35 (1)	07:57 16:56
19	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:35	08:07 (1) 28 08:35 (1)	07:57 16:55
20	05:59 21:05	06:33 20:26	07:09 19:30	07:46 18:34	08:08 (1) 26 08:34 (1)	07:58 16:54
21	06:00 21:04	06:34 20:24	07:10 19:28	07:47 18:32	08:09 (1) 24 08:33 (1)	07:59 16:53
22	06:01 21:03	06:35 20:22	07:12 19:26	07:49 18:31	08:11 (1) 22 08:33 (1)	07:59 16:52
23	06:02 21:02	06:37 20:21	07:13 19:24	07:50 18:29	08:12 (1) 20 08:32 (1)	08:00 16:52
24	06:03 21:01	06:38 20:19	07:14 19:22	07:51 18:27	08:13 (1) 17 08:30 (1)	08:00 16:51
25	06:04 21:01	06:39 20:17	07:15 19:20	07:53 18:26	08:15 (1) 14 08:29 (1)	08:00 16:50
26	06:05 21:00	06:40 20:16	07:16 19:19	07:54 18:24	08:16 (1) 11 08:27 (1)	08:01 16:50
27	06:06 20:58	06:41 20:14	07:18 19:17	07:55 18:23	08:18 (1) 7 08:25 (1)	08:01 16:49
28	06:07 20:57	06:42 20:12	07:19 19:15	07:57 18:21	08:19 (1) 16:49	08:01 16:52
29	06:08 20:56	06:44 20:10	07:20 19:13	07:58 18:20	07:39 16:48	08:02 16:53
30	06:09 20:55	06:45 20:09	07:21 19:11	07:59 18:18	07:40 16:48	08:02 16:54
31	06:10 20:54	06:46 20:07	07:22 19:09	08:01 18:17	08:02 18:17	08:02 16:55
Potential sun hours	471	435	377	341	289	276
Total, worst case		32	116	434		
Sun reduction		0.74	0.69	0.63		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.57	0.57	0.64		
Total reduction		0.41	0.38	0.39		
Total, real		13	45	171		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H379 - H379

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:31	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:08	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:18	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:39	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:44	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H380 - H380

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:03	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:44
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:05	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:56	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:37	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:52
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:38	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:31	19:36	18:39	16:57	16:47
18	07:58	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:15	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:04	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:52	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:15	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:56	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:58	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	08:00	07:40	08:02
	17:31		19:48	20:27	21:00	21:15	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H381 - H381

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:37	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:02	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:11	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:44	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:12	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:56
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:58
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
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	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
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27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:37	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:02
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H382 - H382

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:08	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:45
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:51	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:57	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:46
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:42	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:29		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:43	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H383 - H383

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:45
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:45
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:08	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:51	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H384 - H384

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:04	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:02	19:06	17:13	16:47
4	08:02	07:42	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:45
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:08	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:14	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:47	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:13	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:51
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:40	19:47	18:49	17:03	16:46
12	08:01	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:10	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:34	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:10	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:08	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:48	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:55	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:32	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:03	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:02	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:01
	17:24	18:06	19:42	20:21	20:55	21:14	21:01	20:17	19:21	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	21:00	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:15	20:59	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:15	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:26	20:59	21:15	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	465	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H386 - H386

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:04	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:46
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:50
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:59	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:14	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H387 - H387

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:28	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H388 - H388

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:20	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H389 - H389

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H390 - H390

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H391 - H391

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H392 - H392

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H393 - H393

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H394 - H394

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H395 - H395

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H396 - H396

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:15	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:16	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:48	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:56	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:51	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:10	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:35	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:41	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H397 - H397

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H398 - H398

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H399 - H399

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H400 - H400

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:41	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:56	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:40	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H401 - H401

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H402 - H402

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:12	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:11	16:46
5	08:02	07:40	06:57	07:00	06:11	05:42	05:46	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:28	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:20	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:46	19:23	20:02	20:39	21:09	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:40	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:52	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:44	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:03	07:40	07:21	07:55
	17:11	17:53	19:29	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:35	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:13	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:55	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:53	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:52	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:52	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:04	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:27	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:47	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:21	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:11	06:18	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H403 - H403

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:20	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:54	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:25	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H404 - H404

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H405 - H405

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:59
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
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	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
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27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H406 - H406

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:03	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:50	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:52
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:45	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:18	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	471	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H407 - H407

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:24	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H408 - H408

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H409 - H409

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:47
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:56	07:31	07:12	07:49
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:37	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:45	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:48	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	08:00
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H410 - H410

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:48
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:11	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	08:00	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H411 - H411

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:39	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:06	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H412 - H412

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H413 - H413

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H414 - H414

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H415 - H415

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H416 - H416

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H417 - H417

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H418 - H418

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H419 - H419

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H420 - H420

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H421 - H421

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H422 - H422

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H423 - H423

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H424 - H424

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H425 - H425

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H426 - H426

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H427 - H427

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:46
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:07	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H428 - H428

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:11	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H429 - H429

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H430 - H430

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H431 - H431

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H432 - H432

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H433 - H433

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H434 - H434

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H435 - H435

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H436 - H436

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H437 - H437

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H438 - H438

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H439 - H439

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:40	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:50
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H440 - H440

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H441 - H441

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H442 - H442

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H443 - H443

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H444 - H444

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
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Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H445 - H445

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H446 - H446

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H447 - H447

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H448 - H448

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H449 - H449

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
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25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H450 - H450

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H451 - H451

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H452 - H452

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:52	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:07	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:56	07:31	07:12	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:38	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:09	21:12	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:25	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:30	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:13	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:28	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:02
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H453 - H453

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H454 - H454

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H455 - H455

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H456 - H456

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H457 - H457

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H458 - H458

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H459 - H459

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H460 - H460

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H461 - H461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H462 - H462

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H463 - H463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H464 - H464

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H465 - H465

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
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	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H466 - H466

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H467 - H467

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H468 - H468

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H469 - H469

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H470 - H470

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H471 - H471

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H472 - H472

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H473 - H473

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H474 - H474

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H475 - H475

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H476 - H476

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H477 - H477

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:17	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H478 - H478

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H479 - H479

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H480 - H480

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H481 - H481

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H482 - H482

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
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	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
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	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
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	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
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	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
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	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
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	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
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26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
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	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
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	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H483 - H483

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02 16:56	07:45 17:34	07:04 18:11	07:08 19:51	06:17 20:28	05:44 21:02	05:44 21:14	06:12 20:53	06:47 20:05	07:22 19:09	07:02 17:16	07:41 16:47
2	08:02 16:57	07:44 17:35	07:02 18:13	07:06 19:52	06:16 20:29	05:44 21:03	05:45 21:14	06:13 20:51	06:48 20:03	07:24 19:07	07:03 17:14	07:42 16:47
3	08:02 16:58	07:43 17:37	07:01 18:14	07:04 19:53	06:14 20:30	05:43 21:03	05:45 21:14	06:14 20:50	06:50 20:01	07:25 19:06	07:05 17:13	07:43 16:47
4	08:02 16:59	07:41 17:38	06:59 18:15	07:02 19:55	06:13 20:31	05:43 21:04	05:46 21:14	06:15 20:49	06:51 20:00	07:26 19:04	07:06 17:12	07:44 16:47
5	08:02 17:00	07:40 17:40	06:57 18:17	07:01 19:56	06:11 20:33	05:42 21:05	05:47 21:13	06:16 20:48	06:52 19:58	07:27 19:02	07:07 17:10	07:45 16:46
6	08:02 17:01	07:39 17:41	06:55 18:18	06:59 19:57	06:10 20:34	05:42 21:06	05:47 21:13	06:17 20:46	06:53 19:56	07:29 19:00	07:09 17:09	07:46 16:46
7	08:02 17:02	07:38 17:42	06:54 18:19	06:57 19:58	06:09 20:35	05:42 21:06	05:48 21:13	06:18 20:45	06:54 19:54	07:30 18:56	07:10 17:08	07:47 16:46
8	08:01 17:03	07:36 17:44	07:52 18:21	06:55 19:59	06:07 20:36	05:41 21:07	05:49 21:12	06:19 20:44	06:55 19:52	07:31 18:55	07:11 17:07	07:48 16:46
9	08:01 17:04	07:35 17:45	07:50 19:22	06:53 20:01	06:06 20:37	05:41 21:08	05:49 21:12	06:21 20:42	06:57 19:50	07:32 18:53	07:13 17:05	07:49 16:46
10	08:01 17:05	07:34 17:47	07:48 19:23	06:52 20:02	06:05 20:39	05:41 21:08	05:50 21:11	06:22 20:41	06:58 19:49	07:33 18:51	07:14 17:04	07:50 16:46
11	08:01 17:06	07:32 17:48	07:46 19:24	06:50 20:03	06:04 20:40	05:41 21:09	05:51 21:11	06:23 20:39	06:59 19:47	07:35 18:49	07:15 17:03	07:51 16:46
12	08:00 17:08	07:31 17:49	07:45 19:26	06:48 20:04	06:02 20:41	05:40 21:10	05:52 21:10	06:24 20:38	07:00 19:45	07:36 18:48	07:17 17:02	07:52 16:46
13	08:00 17:09	07:29 17:51	07:43 19:27	06:46 20:06	06:01 20:42	05:40 21:10	05:53 21:10	06:25 20:36	07:01 19:43	07:37 18:46	07:18 17:01	07:53 16:46
14	07:59 17:10	07:28 17:52	07:41 19:28	06:45 20:07	06:00 20:43	05:40 21:11	05:53 21:09	06:26 20:35	07:02 19:41	07:38 18:44	07:19 17:00	07:54 16:46
15	07:59 17:11	07:27 17:54	07:39 19:30	06:43 20:08	05:59 20:44	05:40 21:11	05:54 21:09	06:27 20:33	07:04 19:39	07:40 18:42	07:21 16:59	07:54 16:46
16	07:58 17:12	07:25 17:55	07:37 19:31	06:41 20:09	05:58 20:45	05:40 21:12	05:55 21:08	06:29 20:32	07:05 19:37	07:41 18:41	07:22 16:58	07:55 16:47
17	07:58 17:14	07:24 17:56	07:36 19:32	06:39 20:11	05:57 20:47	05:40 21:12	05:56 21:07	06:30 20:30	07:06 19:36	07:42 18:39	07:23 16:57	07:56 16:47
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19	07:57 17:16	07:20 17:59	07:32 19:35	06:36 20:13	05:55 20:49	05:40 21:13	05:58 21:06	06:32 20:27	07:08 19:32	07:45 18:36	07:26 16:55	07:57 16:47
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21	07:55 17:19	07:17 18:00	07:28 19:37	06:33 20:16	05:53 20:51	05:41 21:13	06:00 21:04	06:34 20:24	07:11 19:28	07:47 18:32	07:29 16:53	07:58 16:48
22	07:54 17:20	07:16 18:02	07:26 19:38	06:31 20:17	05:52 20:52	05:41 21:14	06:01 21:03	06:36 20:22	07:12 19:26	07:49 18:31	07:30 16:53	07:59 16:49
23	07:54 17:21	07:14 18:03	07:24 19:40	06:29 20:18	05:51 20:53	05:41 21:14	06:02 21:02	06:37 20:21	07:13 19:24	07:50 18:29	07:31 16:52	07:59 16:49
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31	07:46 17:32	07:03 19:50	07:10 19:50	06:16 21:01	05:45 21:01	06:10 20:54	06:46 20:07	06:46 20:07	08:01 18:17	08:02 16:55	08:02 16:55	08:02 16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H484 - H484

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
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9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
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10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
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13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
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	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H485 - H485

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H486 - H486

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
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	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H487 - H487

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
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	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:32		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H488 - H488

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:47
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:56	17:08	16:46
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	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
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12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:27	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:46
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:21	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
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27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
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28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
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29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
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30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
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Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
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Wind dir. red.												
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Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H489 - H489

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H490 - H490

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H491 - H491

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:40	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H492 - H492

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:32	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:02	07:36	07:52	06:55	06:07	05:41	05:49	06:20	06:56	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:51	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:25	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:05	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:55
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:21	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:13	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:21	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:16	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:38	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:11	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H493 - H493

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:45	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:42	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:49	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:53	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:47
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:34	07:11	07:47	07:29	07:58
	17:19	18:00	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:29	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:41	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:24	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:42	06:06	06:41	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H494 - H494

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:23	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:03	21:14	20:51	20:03	19:08	17:14	16:47
3	08:02	07:43	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:14	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:12	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:20	06:56	07:31	07:11	07:48
	17:03	17:44	18:21	20:00	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:34	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:47	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:16	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:39	07:20	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:46	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:40	05:57	05:40	05:56	06:30	07:06	07:42	07:24	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:07	20:29	19:34	18:37	16:56	16:47
19	07:57	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:26	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:25	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:33	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:17	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:08	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:09	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:11	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H495 - H495

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H496 - H496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:49	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:55	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
6	08:02	07:39	06:55	06:59	06:10	05:42	05:47	06:17	06:53	07:29	07:09	07:46
	17:01	17:41	18:18	19:57	20:34	21:06	21:13	20:46	19:56	19:00	17:09	16:46
7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
8	08:01	07:36	07:52	06:55	06:07	05:41	05:49	06:19	06:55	07:31	07:11	07:48
	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:44	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
10	08:01	07:34	07:48	06:52	06:05	05:41	05:50	06:22	06:58	07:33	07:14	07:50
	17:05	17:47	19:23	20:02	20:39	21:08	21:11	20:41	19:49	18:51	17:04	16:46
11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
	17:06	17:48	19:24	20:03	20:40	21:09	21:11	20:39	19:47	18:49	17:03	16:46
12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
	17:08	17:49	19:26	20:04	20:41	21:10	21:10	20:38	19:45	18:48	17:02	16:46
13	08:00	07:29	07:43	06:46	06:01	05:40	05:53	06:25	07:01	07:37	07:18	07:53
	17:09	17:51	19:27	20:06	20:42	21:10	21:10	20:36	19:43	18:46	17:01	16:46
14	07:59	07:28	07:41	06:45	06:00	05:40	05:54	06:26	07:02	07:38	07:19	07:54
	17:10	17:52	19:28	20:07	20:43	21:11	21:09	20:35	19:41	18:44	17:00	16:46
15	07:59	07:27	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:09	20:33	19:39	18:42	16:59	16:46
16	07:58	07:25	07:37	06:41	05:58	05:40	05:55	06:29	07:05	07:41	07:22	07:55
	17:12	17:55	19:31	20:09	20:45	21:12	21:08	20:32	19:37	18:41	16:58	16:47
17	07:58	07:24	07:36	06:39	05:57	05:40	05:56	06:30	07:06	07:42	07:23	07:56
	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:36	18:39	16:57	16:47
18	07:57	07:22	07:34	06:38	05:56	05:40	05:57	06:31	07:07	07:44	07:25	07:57
	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
19	07:56	07:20	07:32	06:36	05:55	05:40	05:58	06:32	07:08	07:45	07:26	07:57
	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:01	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
21	07:55	07:17	07:28	06:33	05:53	05:41	06:00	06:35	07:11	07:47	07:29	07:58
	17:19	18:01	19:37	20:16	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
22	07:54	07:16	07:26	06:31	05:52	05:41	06:01	06:36	07:12	07:49	07:30	07:59
	17:20	18:02	19:38	20:17	20:52	21:14	21:03	20:22	19:26	18:31	16:53	16:49
23	07:54	07:14	07:24	06:30	05:51	05:41	06:02	06:37	07:13	07:50	07:31	07:59
	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:21	19:24	18:29	16:52	16:49
24	07:53	07:12	07:23	06:28	05:50	05:42	06:03	06:38	07:14	07:51	07:32	08:00
	17:23	18:05	19:41	20:19	20:54	21:14	21:01	20:19	19:22	18:28	16:51	16:50
25	07:52	07:11	07:21	06:26	05:49	05:42	06:04	06:39	07:15	07:53	07:34	08:00
	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:21	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:01
	17:26	18:07	19:43	20:22	20:56	21:14	20:59	20:15	19:19	18:25	16:50	16:51
27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:42	07:18	07:55	07:36	08:01
	17:27	18:09	19:45	20:23	20:57	21:14	20:58	20:14	19:17	18:23	16:49	16:52
28	07:49	07:06	07:15	06:22	05:47	05:43	06:07	06:43	07:19	07:57	07:37	08:01
	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:22	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
30	07:47		07:12	06:19	05:46	05:44	06:09	06:45	07:21	07:59	07:40	08:02
	17:31		19:48	20:27	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: V100-2.0 80m HH v26Shadow receptor: H497 - H497

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.57	0.59	0.59	0.61	0.65	0.70	0.76	0.74	0.69	0.63	0.50	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
948	364	341	373	483	625	1,207	923	579	685	869	1,169	8,564

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:02	07:45	07:04	07:08	06:17	05:44	05:44	06:12	06:47	07:22	07:02	07:41
	16:56	17:34	18:11	19:51	20:28	21:02	21:14	20:53	20:05	19:09	17:16	16:48
2	08:02	07:44	07:02	07:06	06:16	05:44	05:45	06:13	06:48	07:24	07:03	07:42
	16:57	17:35	18:13	19:52	20:29	21:02	21:14	20:51	20:03	19:07	17:14	16:47
3	08:02	07:42	07:01	07:04	06:14	05:43	05:46	06:14	06:50	07:25	07:05	07:43
	16:58	17:37	18:14	19:53	20:30	21:03	21:14	20:50	20:01	19:06	17:13	16:47
4	08:02	07:41	06:59	07:02	06:13	05:43	05:46	06:15	06:51	07:26	07:06	07:44
	16:59	17:38	18:15	19:54	20:31	21:04	21:13	20:49	20:00	19:04	17:12	16:47
5	08:02	07:40	06:57	07:01	06:11	05:43	05:47	06:16	06:52	07:27	07:07	07:45
	17:00	17:40	18:17	19:56	20:33	21:05	21:13	20:48	19:58	19:02	17:10	16:46
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7	08:02	07:38	06:54	06:57	06:09	05:42	05:48	06:18	06:54	07:30	07:10	07:47
	17:02	17:42	18:19	19:58	20:35	21:06	21:13	20:45	19:54	18:57	17:08	16:46
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	17:03	17:44	18:21	19:59	20:36	21:07	21:12	20:43	19:52	18:55	17:07	16:46
9	08:01	07:35	07:50	06:53	06:06	05:41	05:50	06:21	06:57	07:32	07:13	07:49
	17:04	17:45	19:22	20:01	20:37	21:08	21:12	20:42	19:50	18:53	17:05	16:46
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11	08:01	07:32	07:46	06:50	06:04	05:41	05:51	06:23	06:59	07:35	07:15	07:51
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12	08:00	07:31	07:45	06:48	06:02	05:41	05:52	06:24	07:00	07:36	07:17	07:52
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15	07:59	07:26	07:39	06:43	05:59	05:40	05:54	06:28	07:04	07:40	07:21	07:54
	17:11	17:54	19:30	20:08	20:44	21:11	21:08	20:33	19:39	18:42	16:59	16:46
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	17:14	17:56	19:32	20:11	20:47	21:12	21:07	20:30	19:35	18:39	16:57	16:47
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	17:15	17:58	19:33	20:12	20:48	21:12	21:06	20:29	19:34	18:37	16:56	16:47
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	17:16	17:59	19:35	20:13	20:49	21:13	21:06	20:27	19:32	18:36	16:55	16:48
20	07:56	07:19	07:30	06:34	05:54	05:41	05:59	06:33	07:09	07:46	07:27	07:58
	17:18	18:00	19:36	20:14	20:50	21:13	21:05	20:25	19:30	18:34	16:54	16:48
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	17:19	18:00	19:37	20:15	20:51	21:13	21:04	20:24	19:28	18:32	16:53	16:48
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	17:20	18:02	19:38	20:17	20:52	21:13	21:03	20:22	19:26	18:31	16:53	16:49
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	17:22	18:03	19:40	20:18	20:53	21:14	21:02	20:20	19:24	18:29	16:52	16:49
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	17:24	18:06	19:42	20:20	20:55	21:14	21:00	20:17	19:20	18:26	16:51	16:51
26	07:51	07:09	07:19	06:25	05:48	05:42	06:05	06:40	07:16	07:54	07:35	08:00
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27	07:50	07:07	07:17	06:23	05:48	05:43	06:06	06:41	07:18	07:55	07:36	08:01
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	17:28	18:10	19:46	20:24	20:58	21:14	20:57	20:12	19:15	18:21	16:49	16:53
29	07:48		07:13	06:20	05:46	05:43	06:08	06:44	07:20	07:58	07:39	08:01
	17:30		19:47	20:25	20:59	21:14	20:56	20:10	19:13	18:20	16:48	16:53
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	17:31		19:48	20:26	21:00	21:14	20:55	20:08	19:11	18:19	16:48	16:54
31	07:46		07:10		05:45		06:10	06:46		08:01		08:02
	17:33		19:50		21:01		20:54	20:07		18:17		16:55
Potential sun hours	287	292	369	403	458	464	470	435	377	341	289	276
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

20162030 Westwood Red Pine

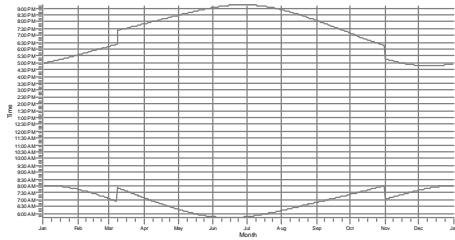
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

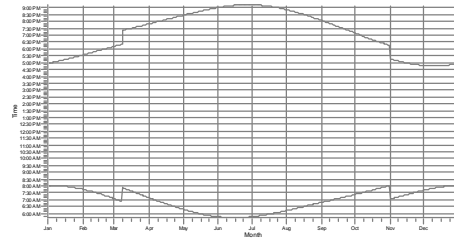
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

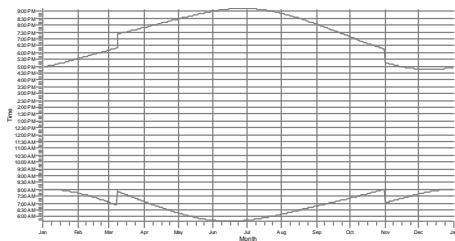
H048: H048



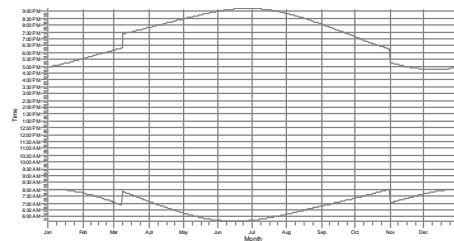
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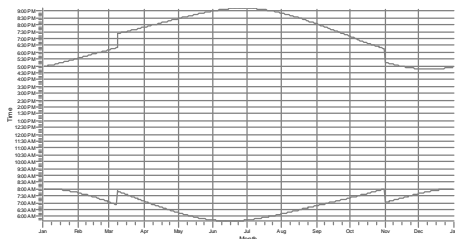
H050: H050



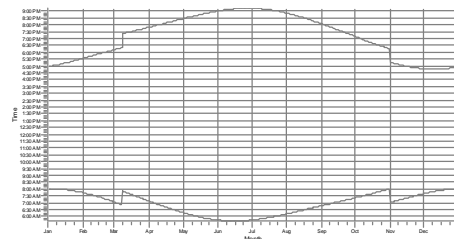
H051: H051



H052: H052



H053: H053



WTGs

Project:

20162030 Westwood Red Pine

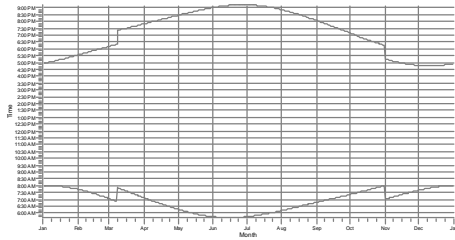
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

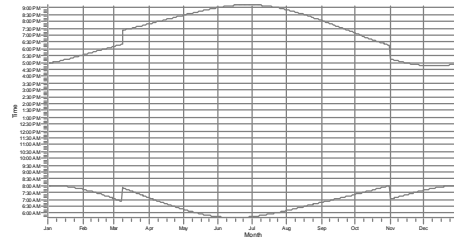
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

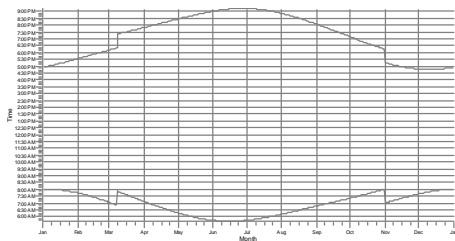
H080: H080



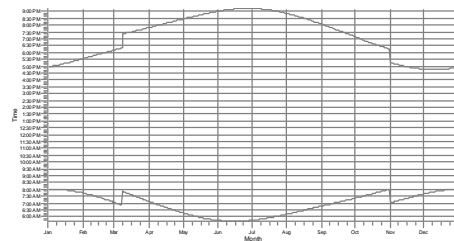
H081: H081



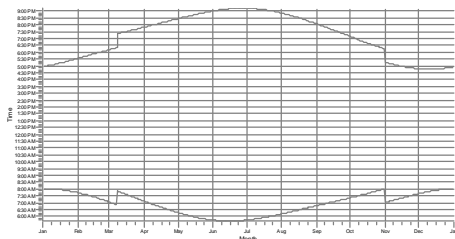
H082: H082



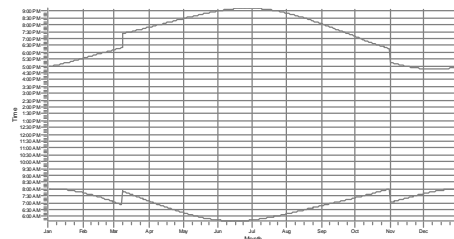
H083: H083



H084: H084



H085: H085



WTGs

Project:

20162030 Westwood Red Pine

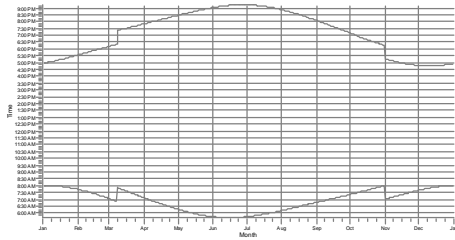
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+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

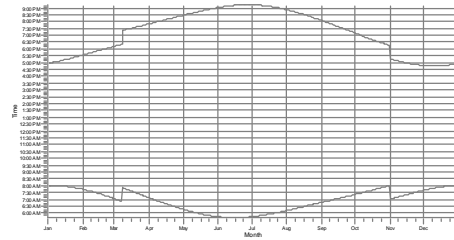
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

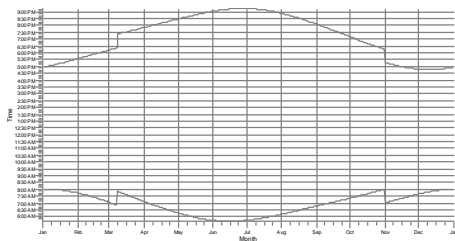
H086: H086



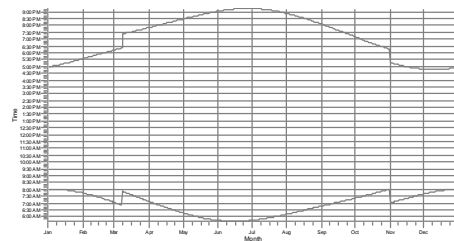
H087: H087



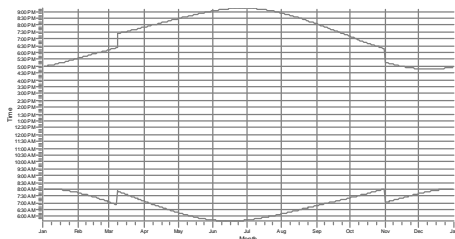
H088: H088



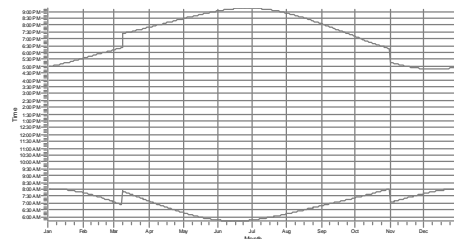
H090: H090



H091: H091



H092: H092



WTGs

Project:

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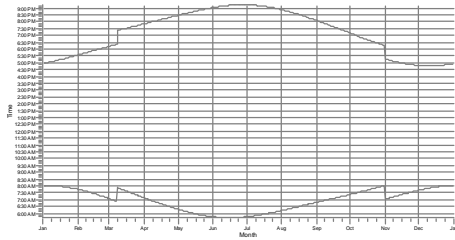
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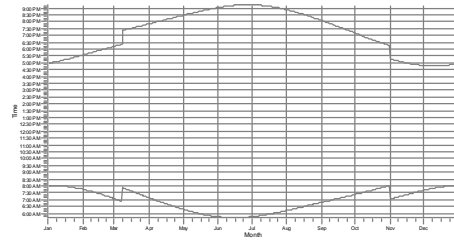
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

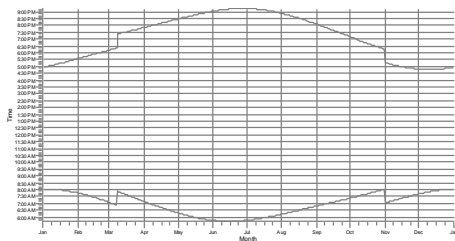
H093: H093



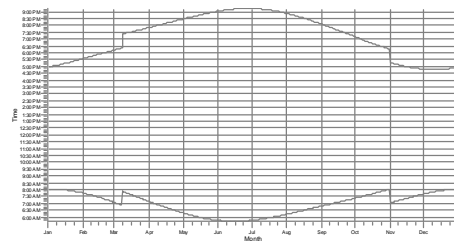
H094: H094



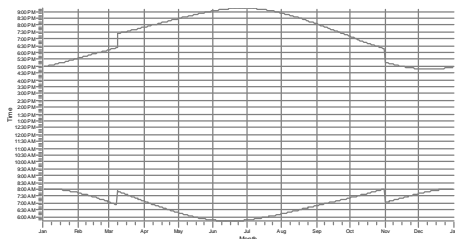
H095: H095



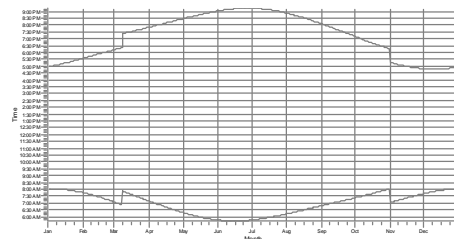
H096: H096



H097: H097



H112: H112



WTGs

Project:

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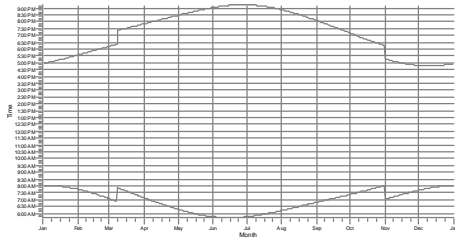
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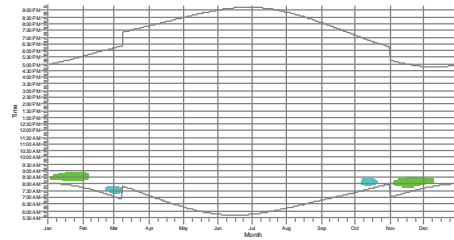
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

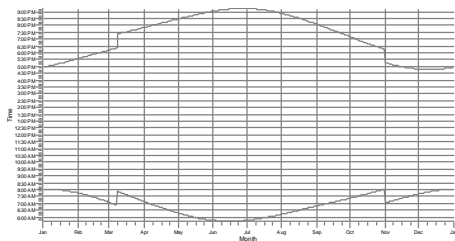
H113: H113



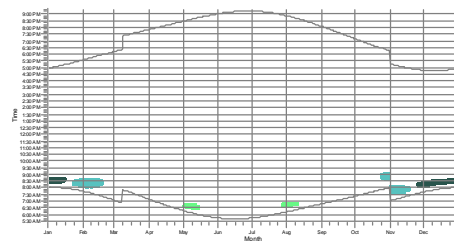
H114: H114



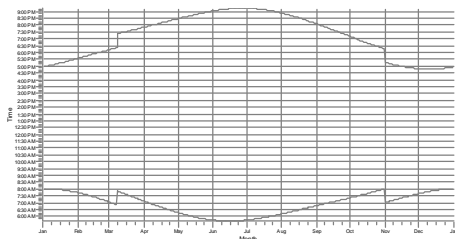
H115: H115



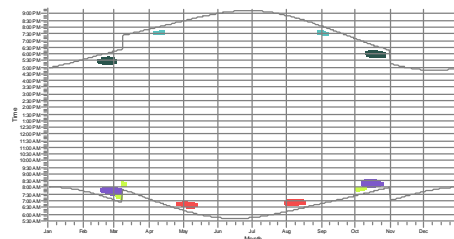
H116: H116



H117: H117



H118: H118



WTGs

- 87: Primary
- 94: Primary
- 95: Primary
- 96: Primary
- 97: Primary
- 98: Primary
- 100: Primary

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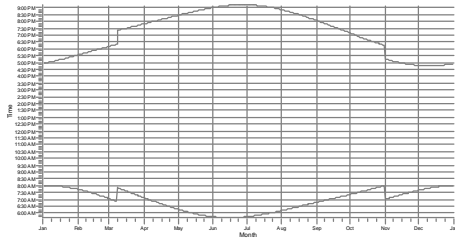
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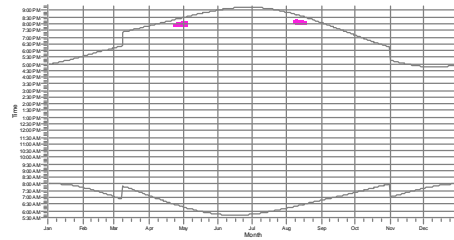
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

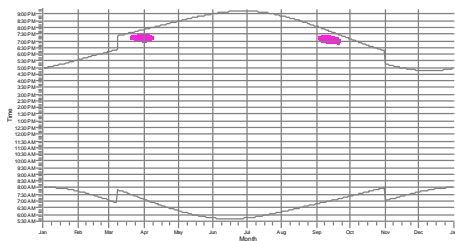
H119: H119



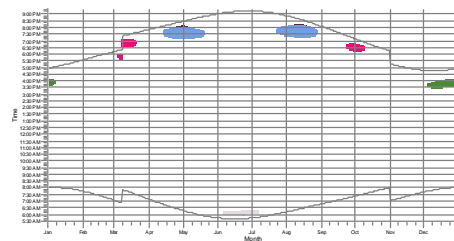
H147: H147



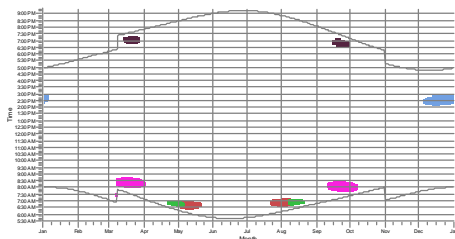
H148: H148



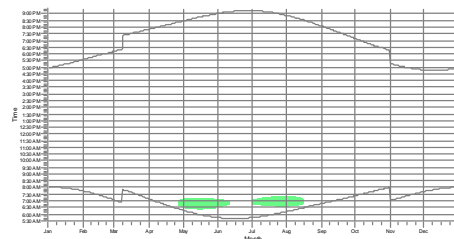
H149: H149



H150: H150



H151: H151



WTGs

- 84: Primary
- 85: Primary
- 86: Primary
- 87: Primary
- 88: Primary
- 89: Primary
- 90: Primary
- 91: Primary
- 93: Primary

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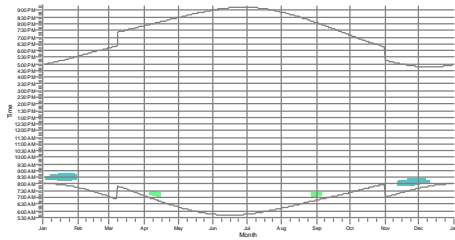
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Calculated:
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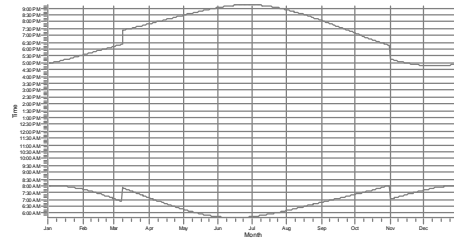
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

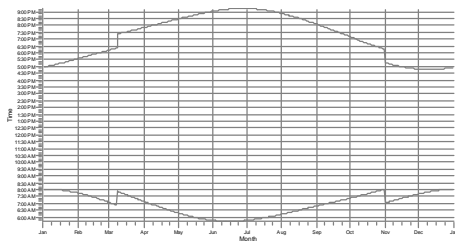
H152: H152



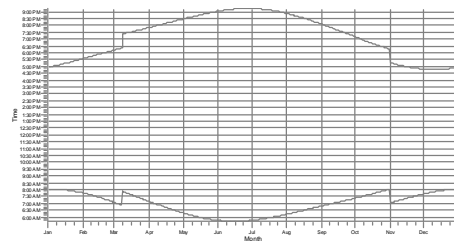
H153: H153



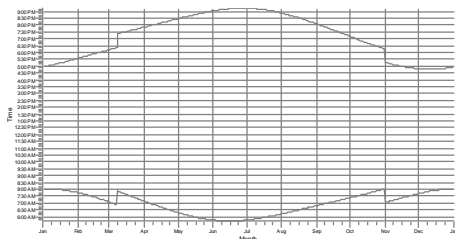
H154: H154



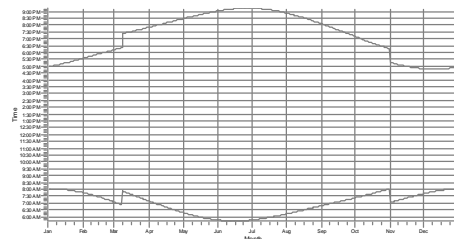
H155: H155



H156: H156



H157: H157



WTGs

87: Primary 95: Primary

Project:

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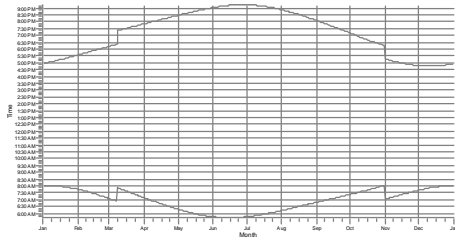
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Calculated:
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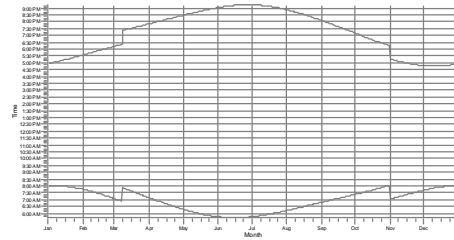
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

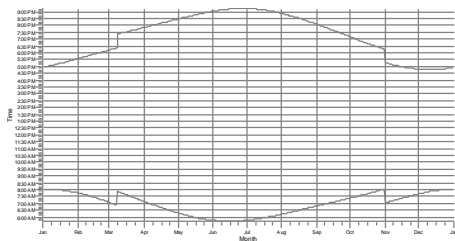
H161: H161



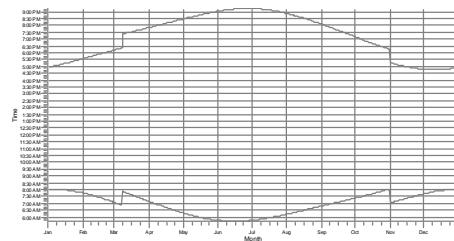
H163: H163



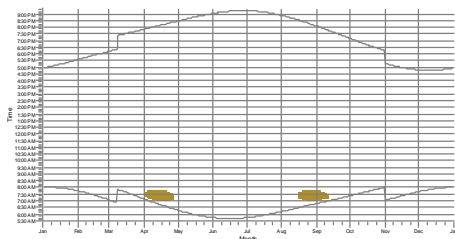
H165: H165



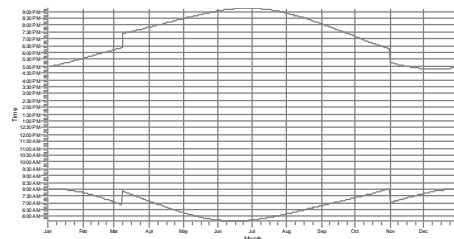
H166: H166



H167: H167



H168: H168



WTGs

78: Primary

Project:

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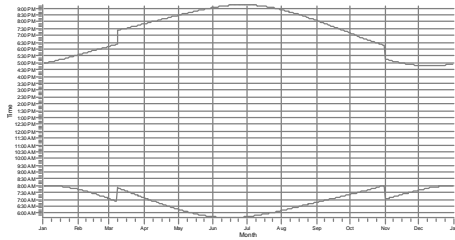
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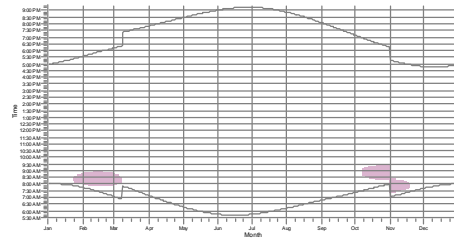
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

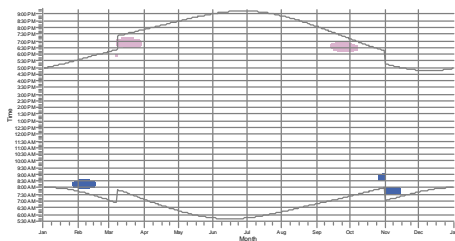
H169: H169



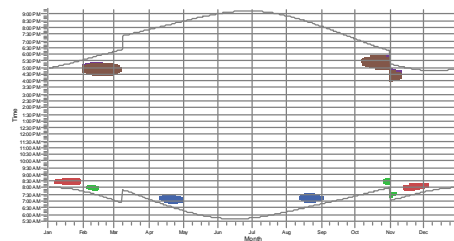
H170: H170



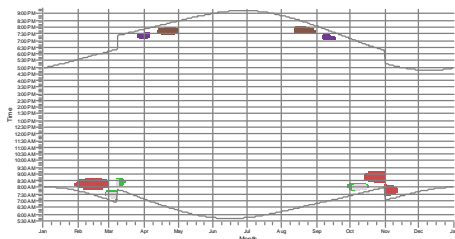
H171: H171



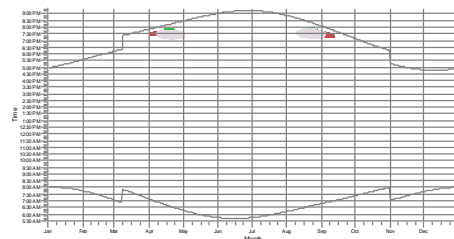
H172: H172



H173: H173



H174: H174



WTGs

- 80: Primary
- 81: Primary
- 82: Primary
- 83: Primary
- 84: Primary
- 85: Primary
- 86: Primary

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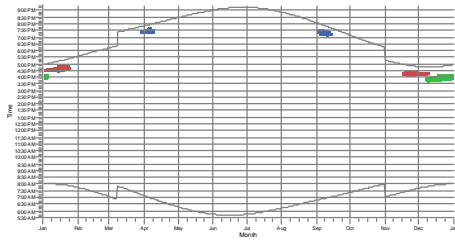
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Calculated:
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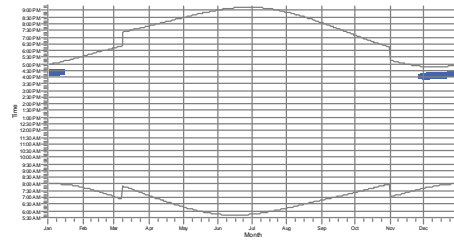
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

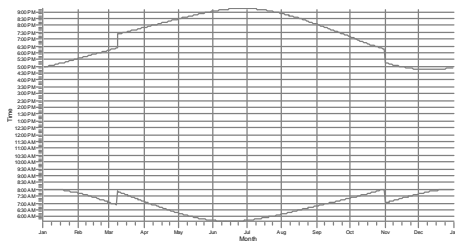
H175: H175



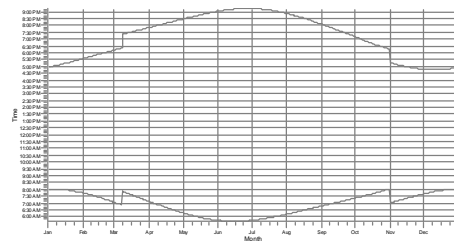
H198: H198



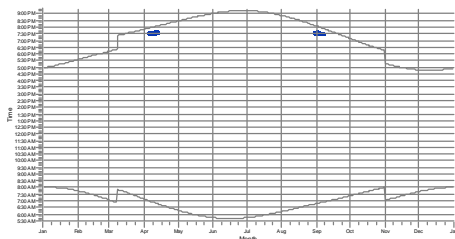
H199: H199



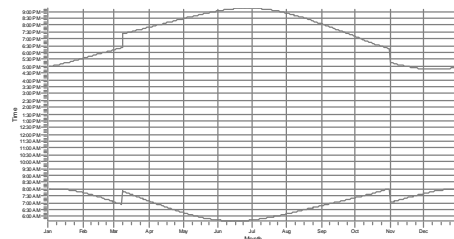
H200: H200



H201: H201



H202: H202



WTGs

77: Primary 83: Primary 84: Primary 85: Primary

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20162030 Westwood Red Pine

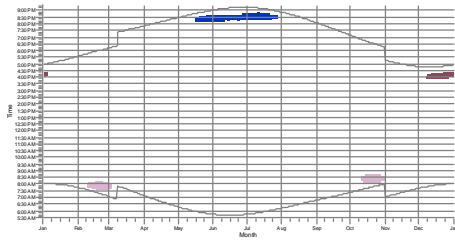
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6/27/2016 2:32 PM/3.0.654

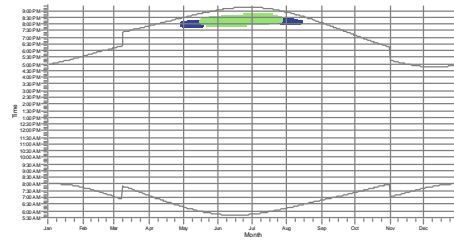
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

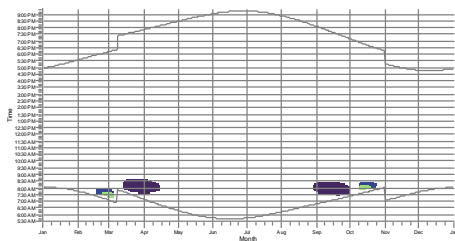
H203: H203



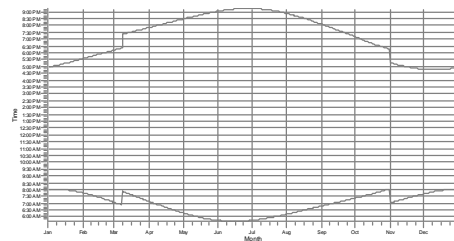
H204: H204



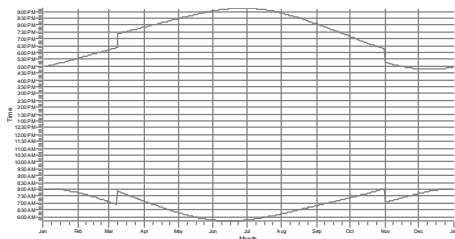
H206: H206



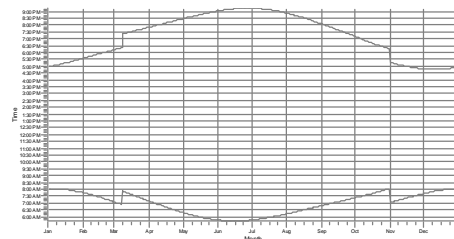
H207: H207



H208: H208



H209: H209



WTGs

- 74: Primary
- 75: Primary
- 76: Primary
- 77: Primary
- 79: Primary
- 80: Primary

Project:

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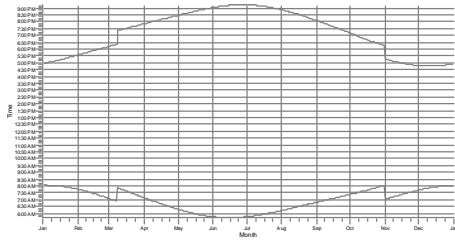
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Calculated:
6/27/2016 2:32 PM/3.0.654

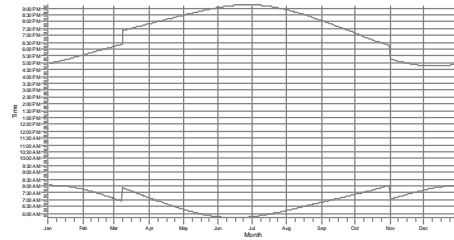
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

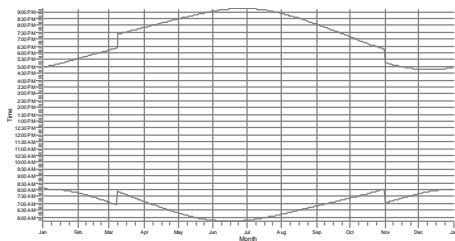
H210: H210



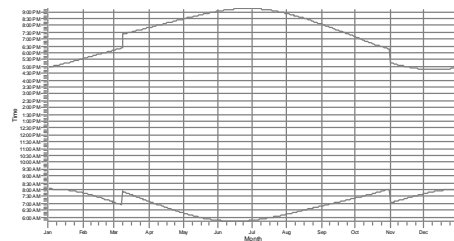
H211: H211



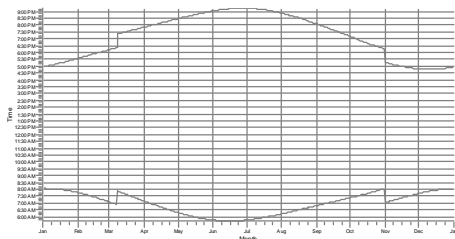
H212: H212



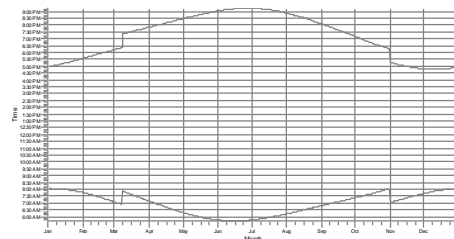
H213: H213



H214: H214



H215: H215



WTGs

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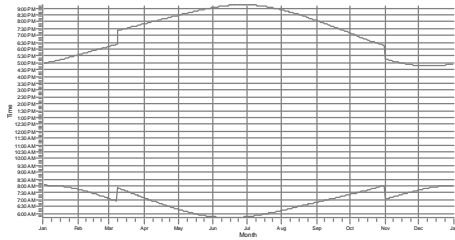
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Calculated:
6/27/2016 2:32 PM/3.0.654

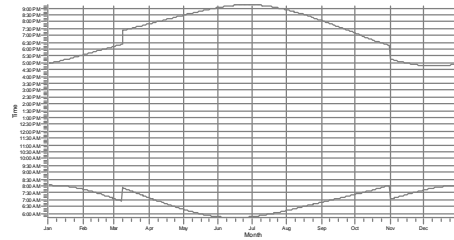
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

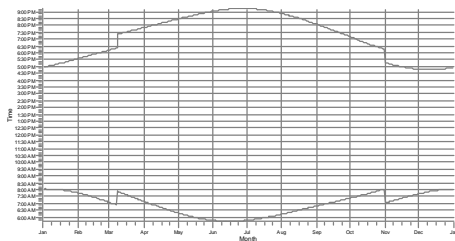
H217: H217



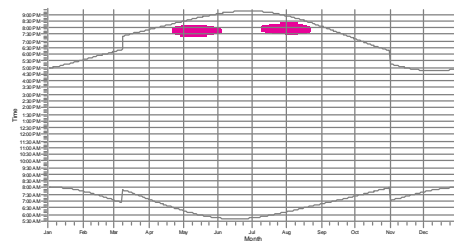
H220: H220



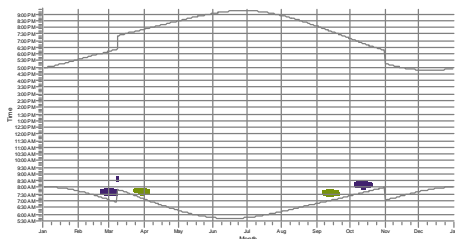
H221: H221



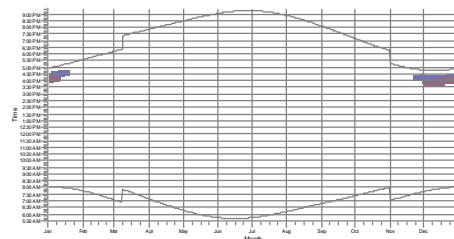
H222: H222



H224: H224



H225: H225



WTGs

- 66: Primary
- 67: Primary
- 68: Primary
- 69: Primary
- 70: Primary

Project:

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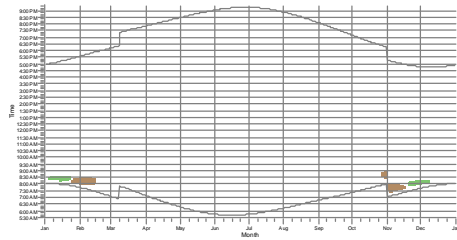
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Calculated:
6/27/2016 2:32 PM/3.0.654

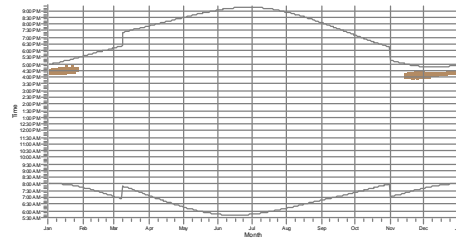
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

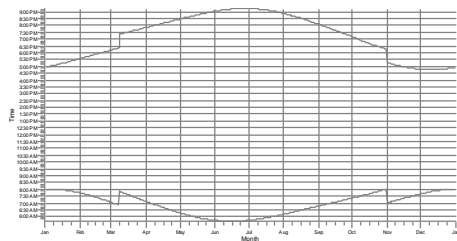
H226: H226



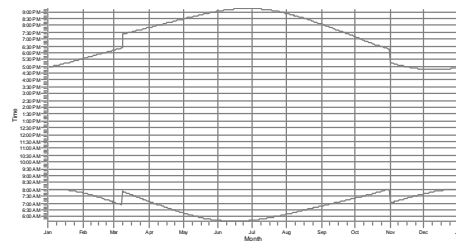
H227: H227



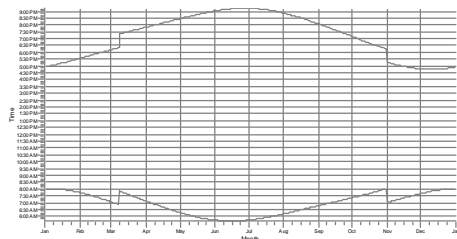
H228: H228



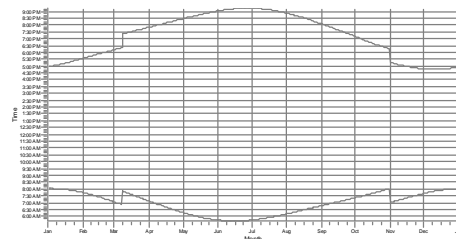
H230: H230



H233: H233



H248: H248



WTGs

71: Primary
 72: Primary

Project:

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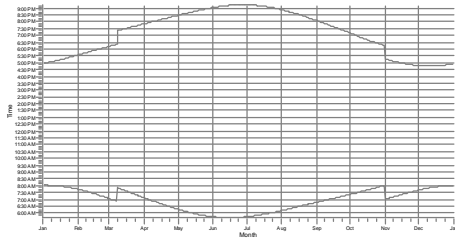
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Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

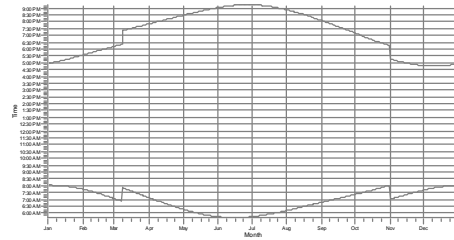
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

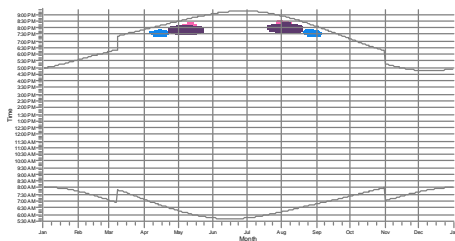
H249: H249



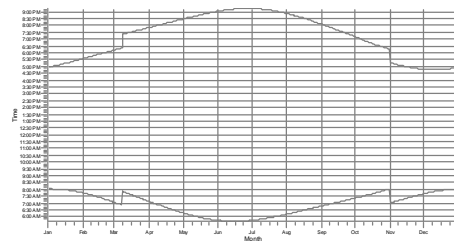
H250: H250



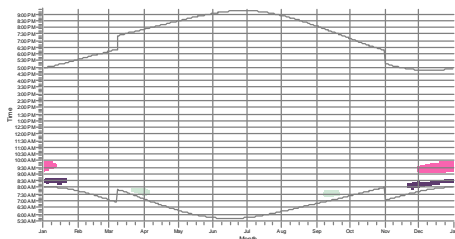
H251: H251



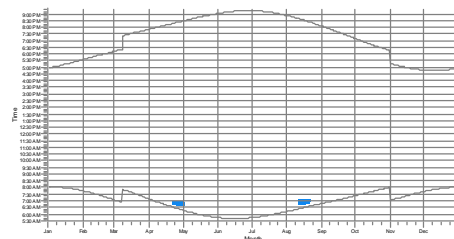
H252: H252



H253: H253



H254: H254



WTGs

60: Primary 61: Primary 62: Primary 63: Primary

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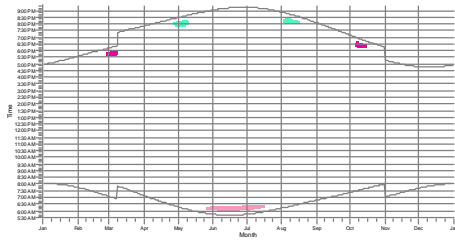
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Calculated:
6/27/2016 2:32 PM/3.0.654

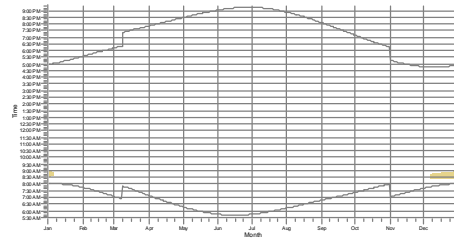
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

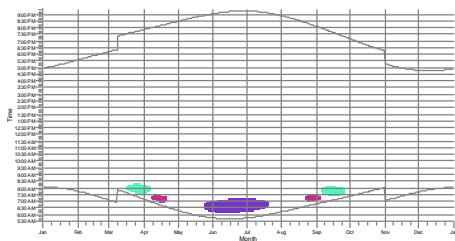
H255: H255



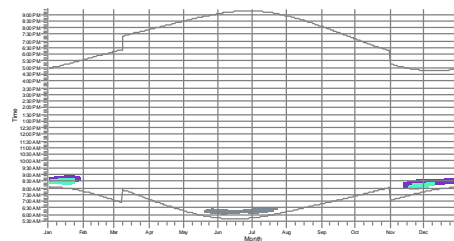
H257: H257



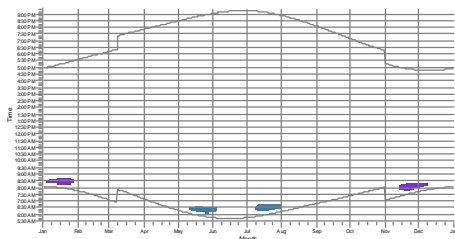
H258: H258



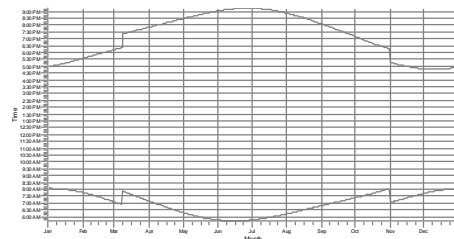
H259: H259



H260: H260



H261: H261



WTGs

- 37: Primary
- 38: Primary
- 55: Primary
- 56: Primary
- 57: Primary
- 58: Primary
- 59: Primary
- 66: Primary

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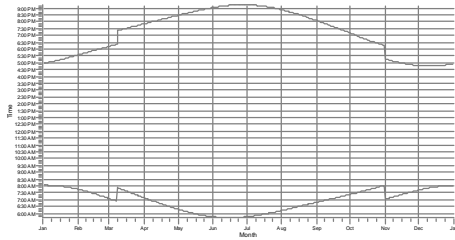
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Calculated:
6/27/2016 2:32 PM/3.0.654

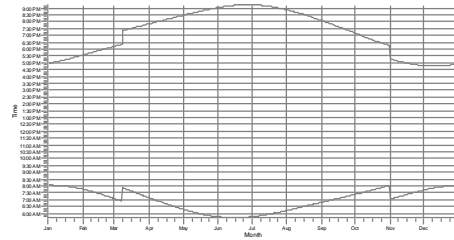
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

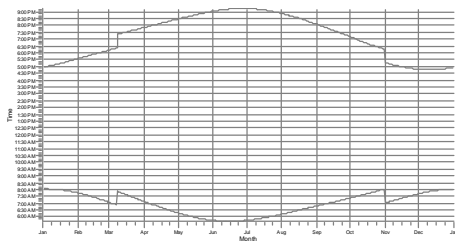
H262: H262



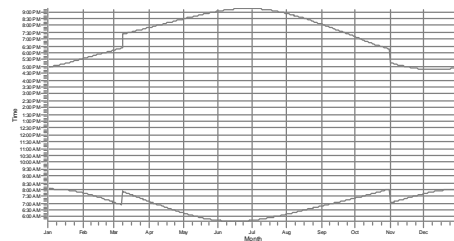
H278: H278



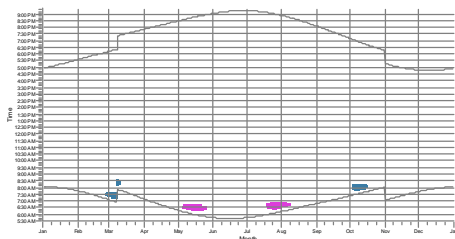
H279: H279



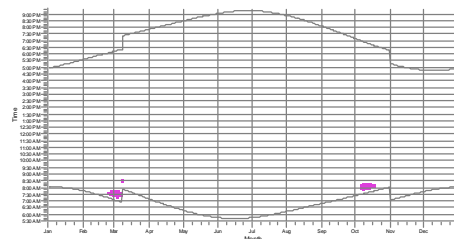
H280: H280



H281: H281



H282: H282



WTGs

35: Primary 37: Primary

Project:

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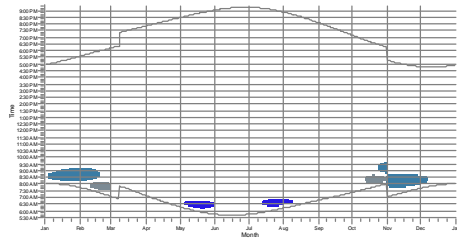
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Calculated:
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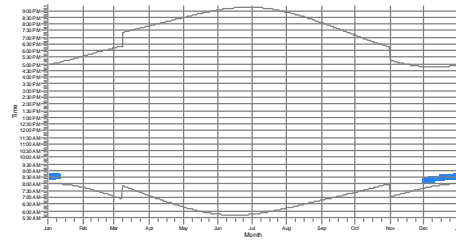
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

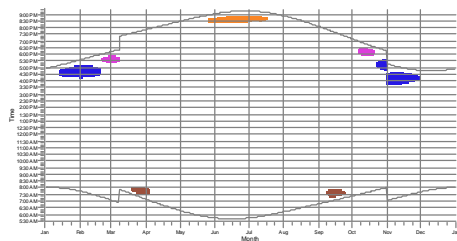
H283: H283



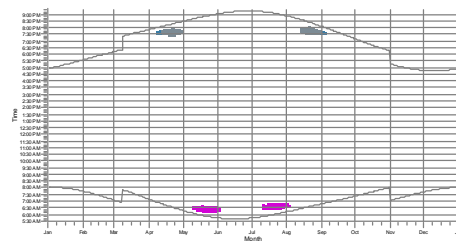
H284: H284



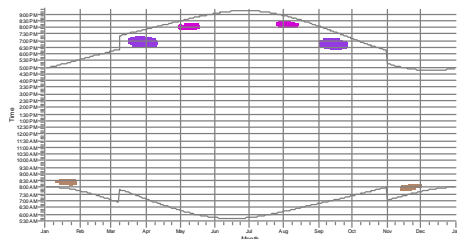
H285: H285



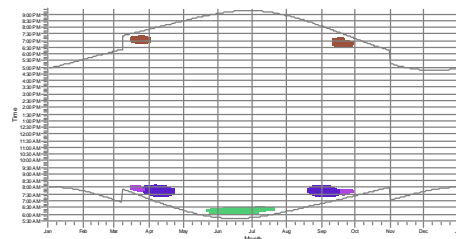
H286: H286



H287: H287



H288: H288

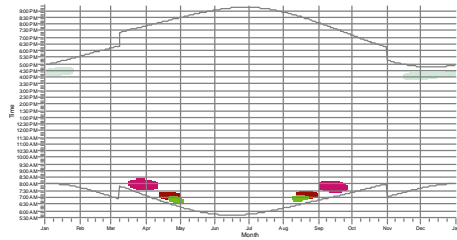


WTGs

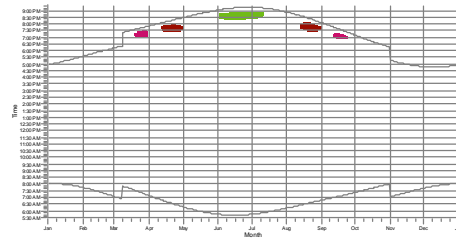
- 23: Primary
- 28: Primary
- 35: Primary
- 36: Primary
- 37: Primary
- 38: Primary
- 39: Primary
- 40: Primary
- 41: Primary
- 42: Primary
- 43: Primary
- 46: Primary
- 64: Primary

SHADOW - Calendar, graphical
 Calculation: V100-2.0 80m HH v26

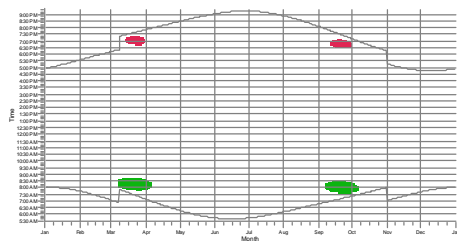
H289: H289



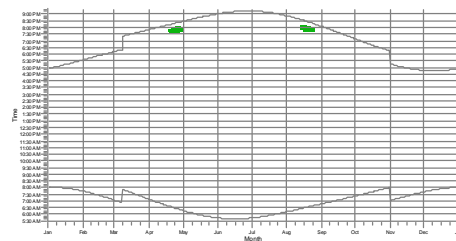
H292: H292



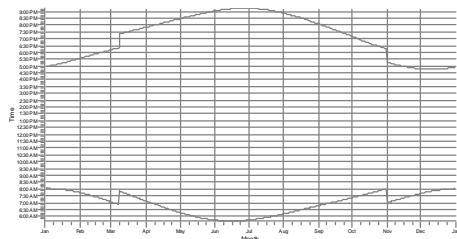
H293: H293



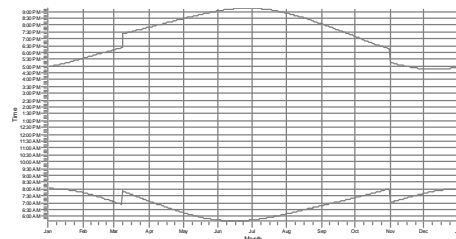
H294: H294



H295: H295



H296: H296



WTGs

- 50: Primary
- 51: Primary
- 52: Primary
- 53: Primary
- 54: Primary
- 61: Primary

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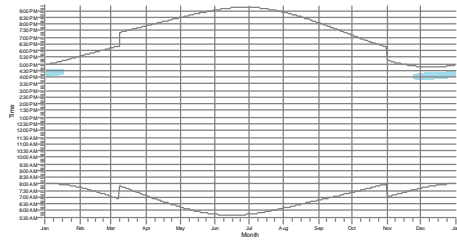
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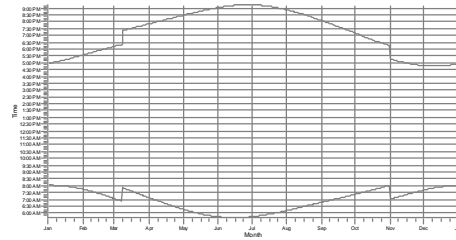
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

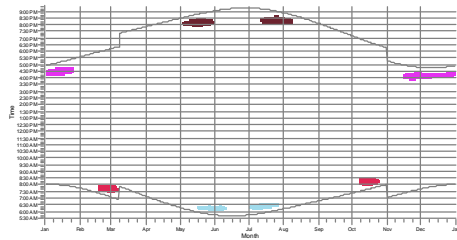
H297: H297



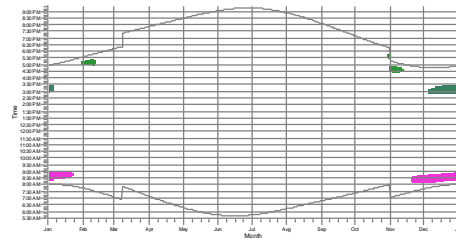
H299: H299



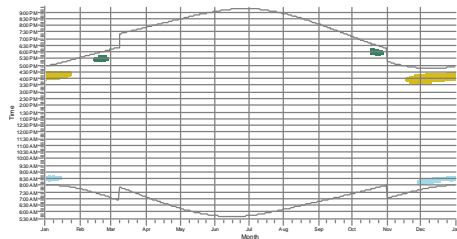
H300: H300



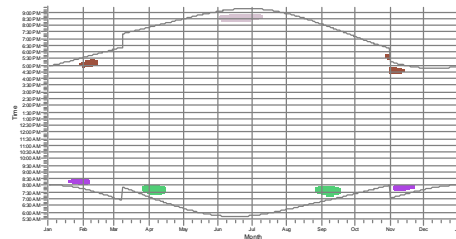
H301: H301



H302: H302



H303: H303



WTGs

- | | | | | | |
|---|---|---|---|---|---|
| 25: Primary | 28: Primary | 30: Primary | 32: Primary | 40: Primary | 47: Primary |
| 27: Primary | 29: Primary | 31: Primary | 33: Primary | 43: Primary | 53: Primary |

Project:

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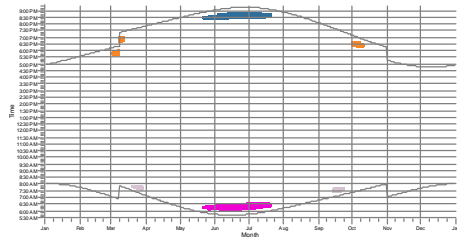
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Calculated:
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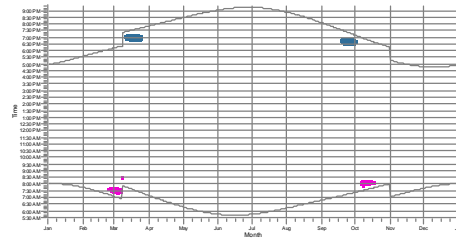
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

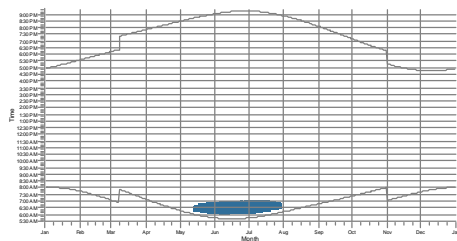
H305: H305



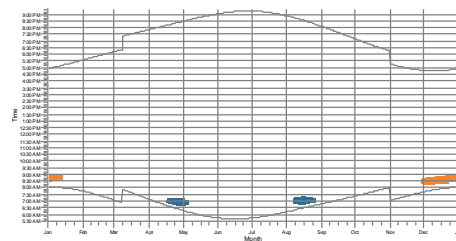
H307: H307



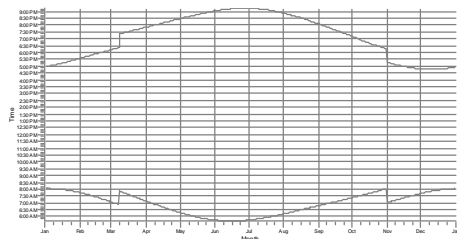
H308: H308



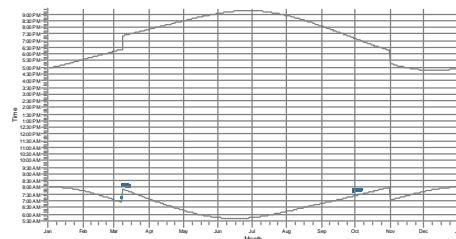
H309: H309



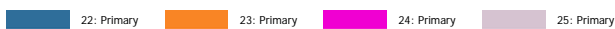
H310: H310



H311: H311



WTGs



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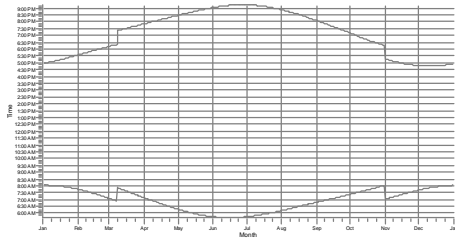
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Calculated:
6/27/2016 2:32 PM/3.0.654

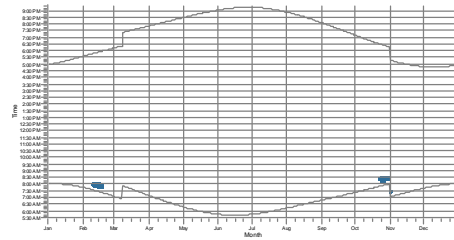
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

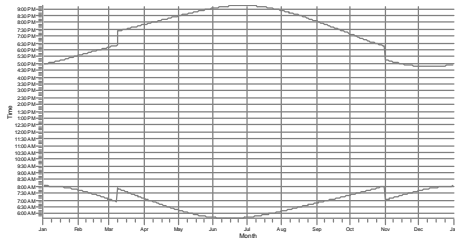
H312: H312



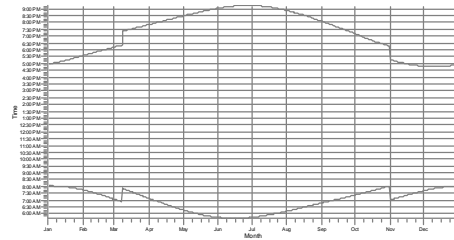
H313: H313



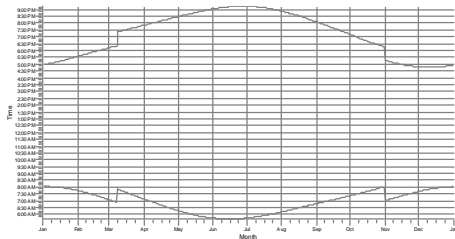
H314: H314



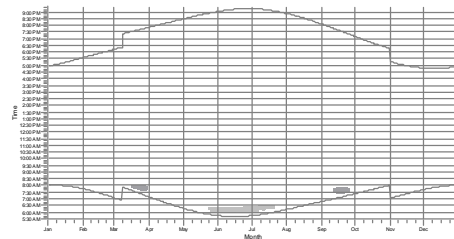
H315: H315



H316: H316



H317: H317



WTGs



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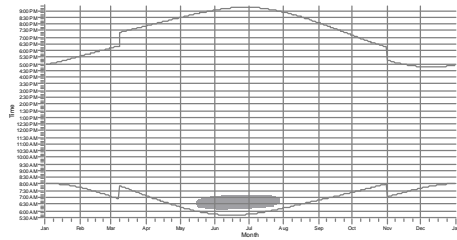
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Calculated:
6/27/2016 2:32 PM/3.0.654

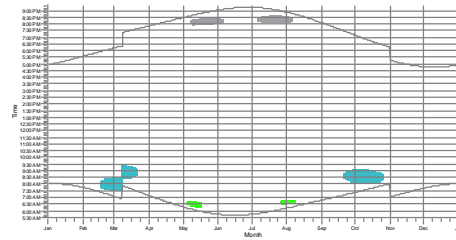
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

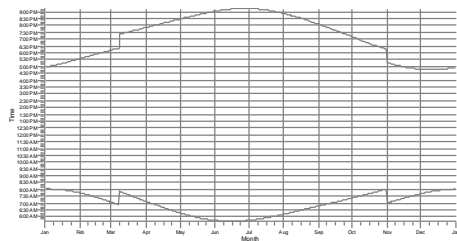
H318: H318



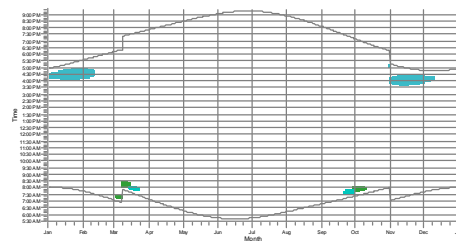
H319: H319



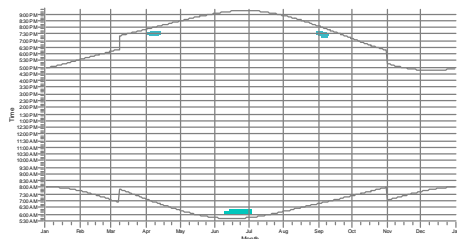
H320: H320



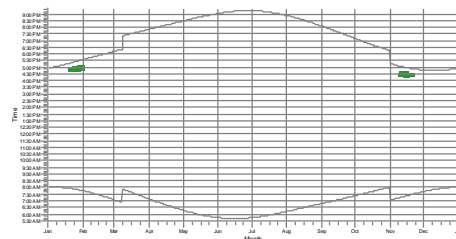
H321: H321



H322: H322



H323: H323



WTGs

- 16: Primary
- 18: Primary
- 19: Primary
- 20: Primary
- 21: Primary
- 27: Primary

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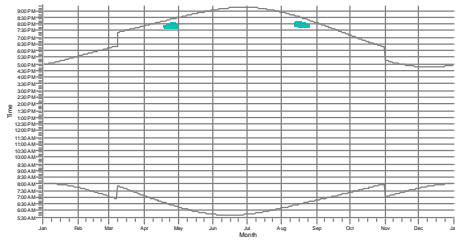
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Calculated:
6/27/2016 2:32 PM/3.0.654

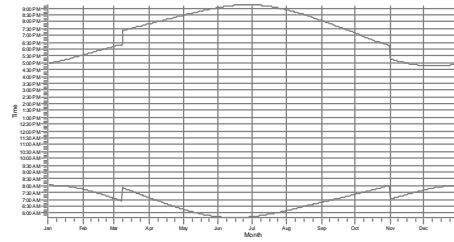
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

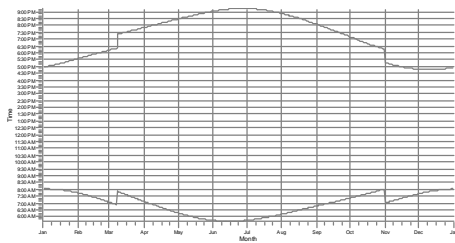
H324: H324



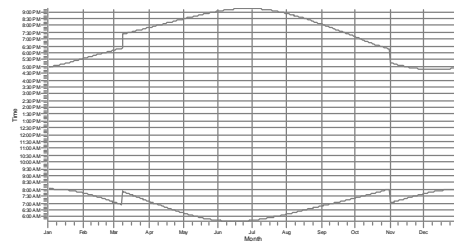
H325: H325



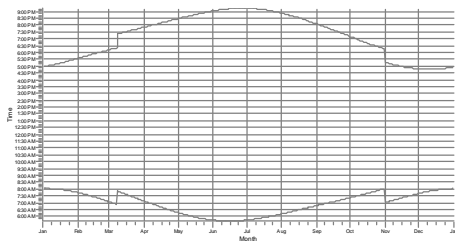
H326: H326



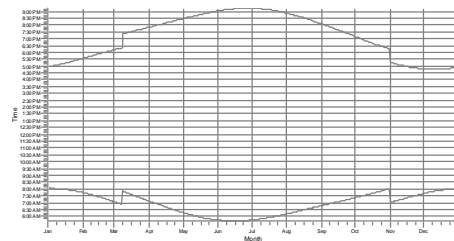
H327: H327



H328: H328



H330: H330



WTGs

21: Primary

Project:

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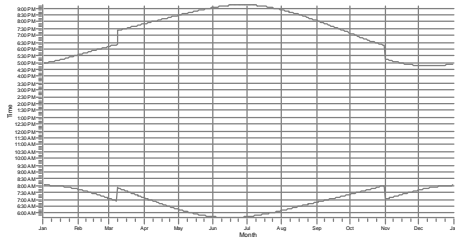
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Calculated:
6/27/2016 2:32 PM/3.0.654

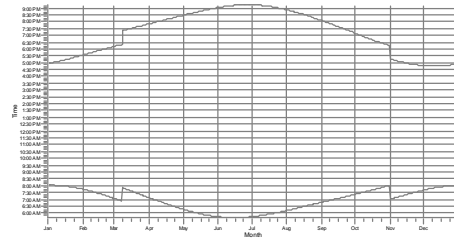
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

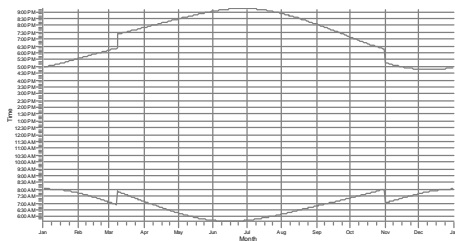
H331: H331



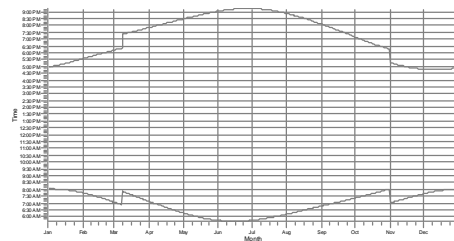
H334: H334



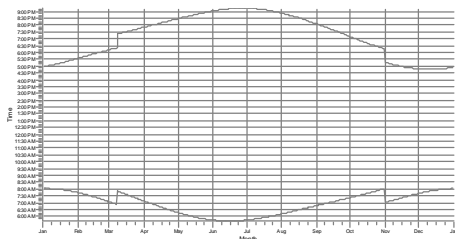
H335: H335



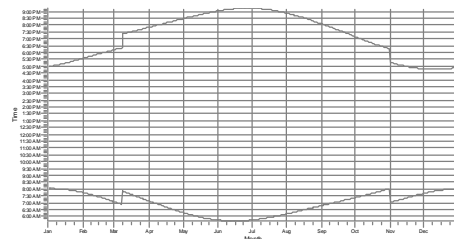
H336: H336



H337: H337



H338: H338



WTGs

Project:

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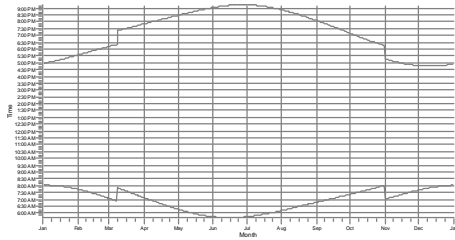
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Calculated:
6/27/2016 2:32 PM/3.0.654

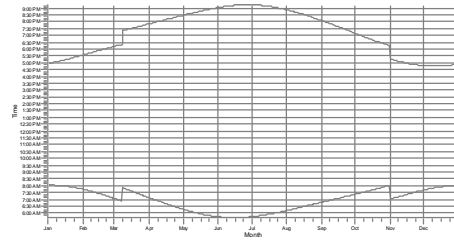
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

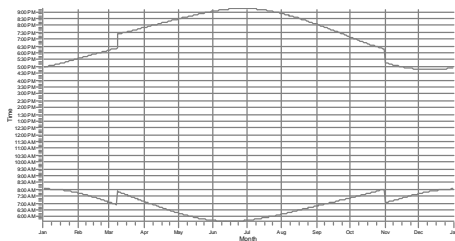
H339: H339



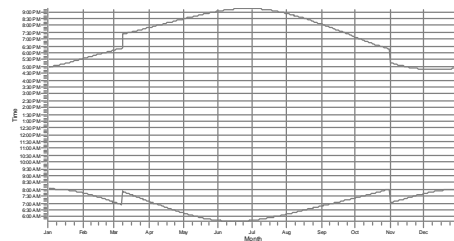
H340: H340



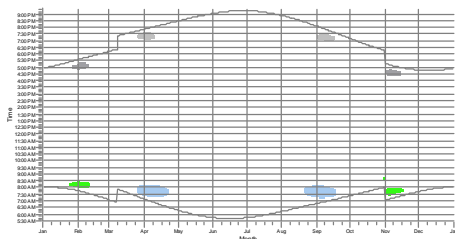
H341: H341



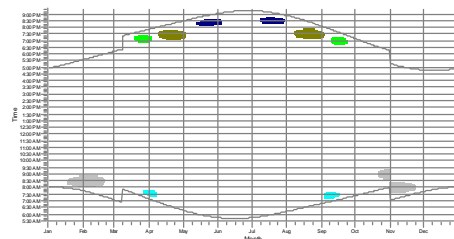
H342: H342



H343: H343



H345: H345



WTGs

- 7: Primary
- 9: Primary
- 10: Primary
- 12: Primary
- 13: Primary
- 15: Primary
- 16: Primary
- 18: Primary

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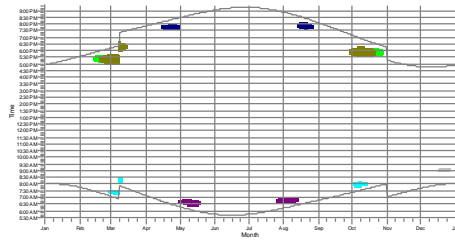
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Calculated:
6/27/2016 2:32 PM/3.0.654

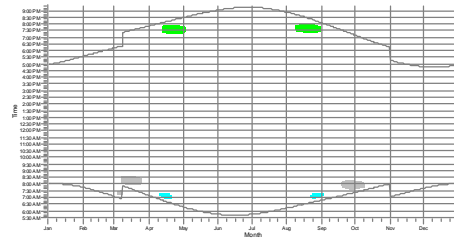
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

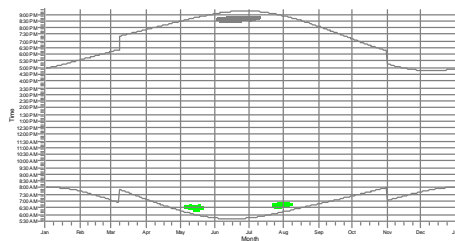
H346: H346



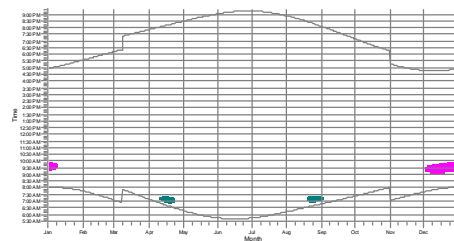
H347: H347



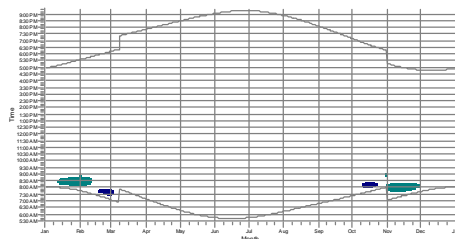
H348: H348



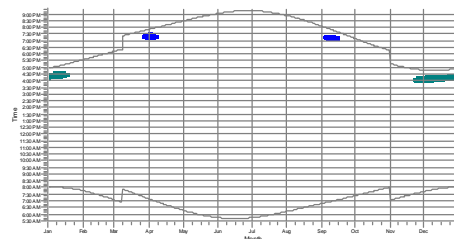
H349: H349



H350: H350



H351: H351



WTGs

- 3: Primary
- 5: Primary
- 7: Primary
- 10: Primary
- 12: Primary
- 4: Primary
- 6: Primary
- 9: Primary
- 11: Primary
- 13: Primary

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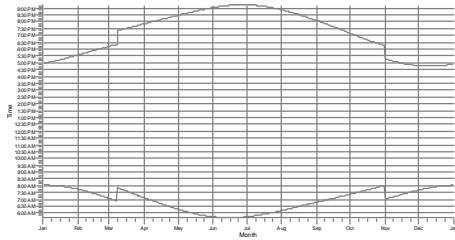
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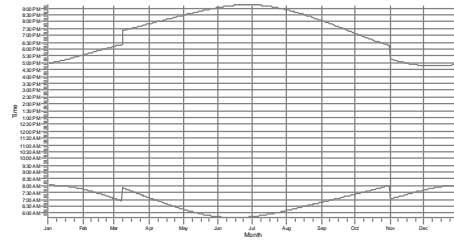
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

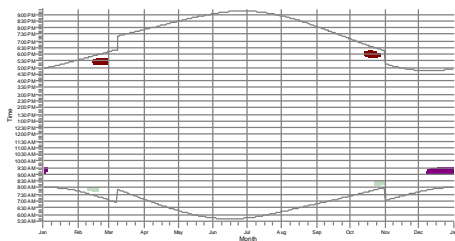
H352: H352



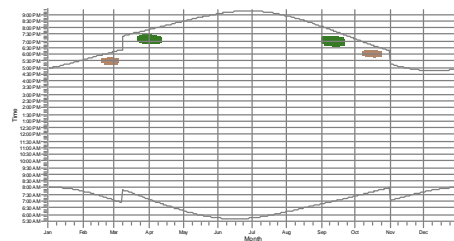
H353: H353



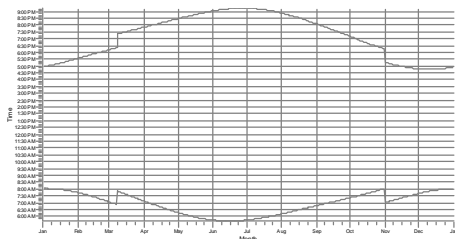
H354: H354



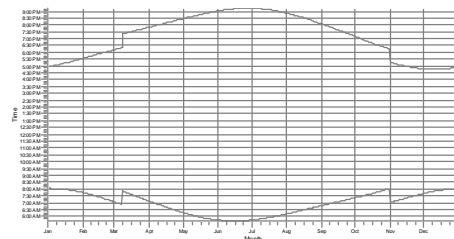
H355: H355



H356: H356



H357: H357



WTGs

- 8: Primary
- 11: Primary
- 14: Primary
- 64: Primary
- 65: Primary

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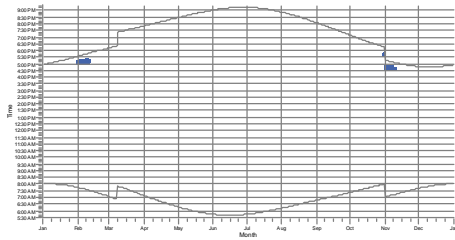
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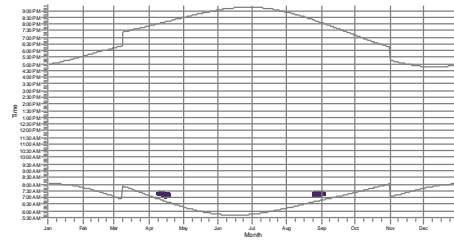
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

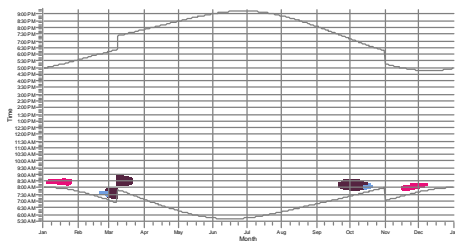
H358: H358



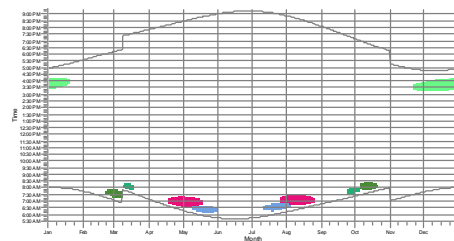
H359: H359



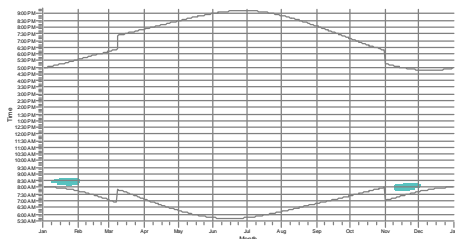
H360: H360



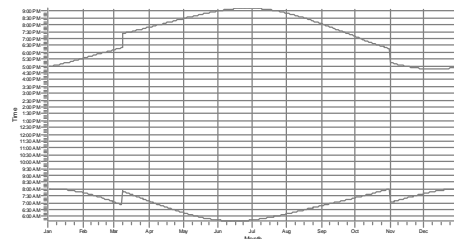
H361: H361



H362: H362



H363: H363



WTGs

- 74: Primary
- 83: Primary
- 87: Primary
- 88: Primary
- 89: Primary
- 90: Primary
- 91: Primary
- 92: Primary
- 95: Primary

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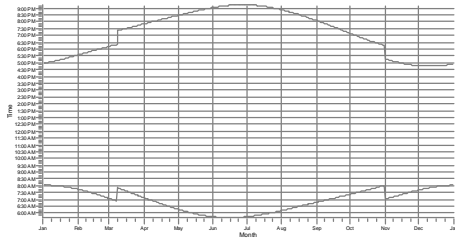
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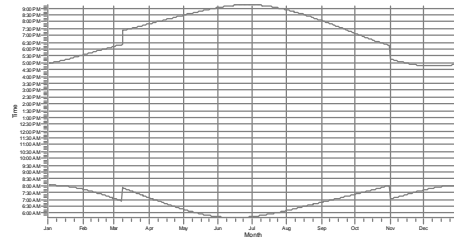
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

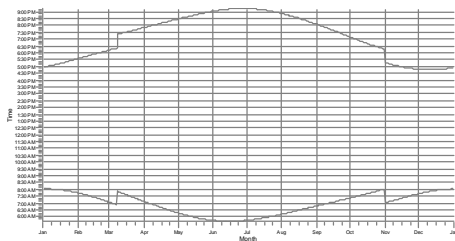
H364: H364



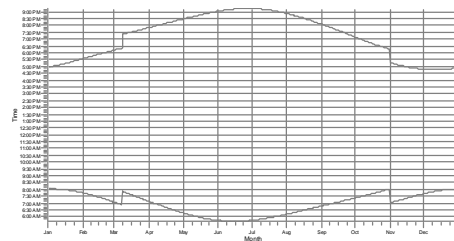
H365: H365



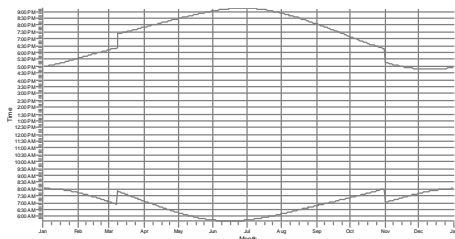
H366: H366



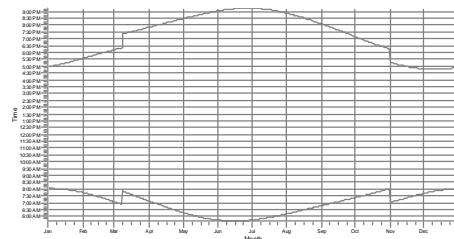
H367: H367



H368: H368



H369: H369



WTGs

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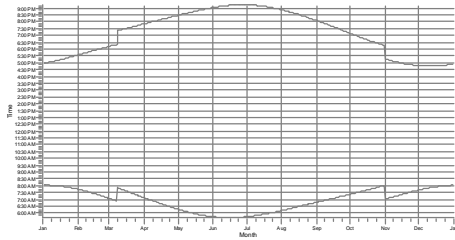
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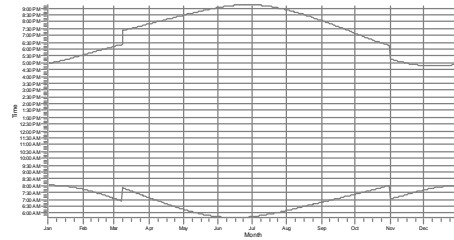
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

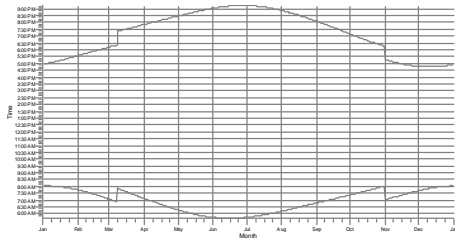
H370: H370



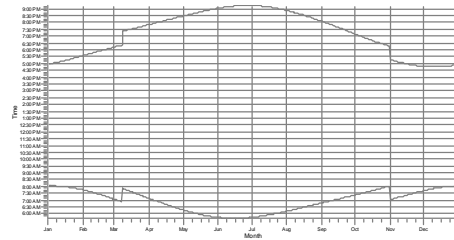
H371: H371



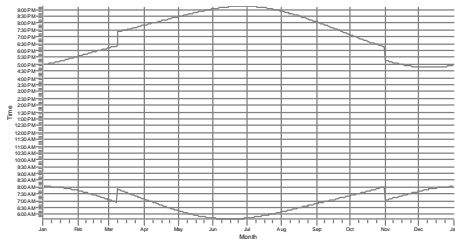
H372: H372



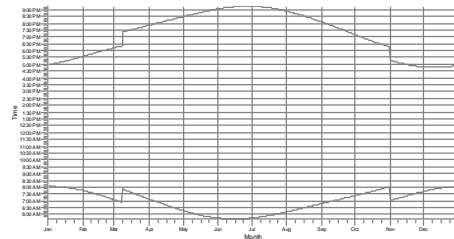
H373: H373



H374: H374



H375: H375



WTGs

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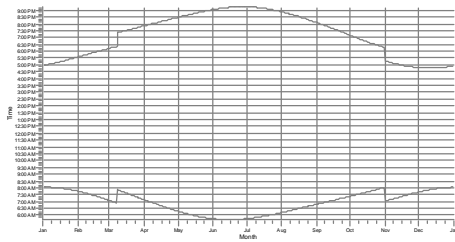
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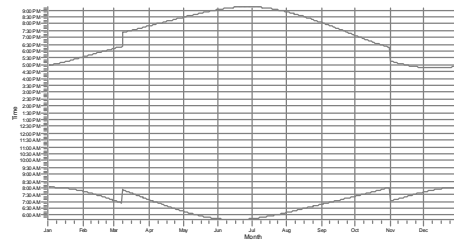
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

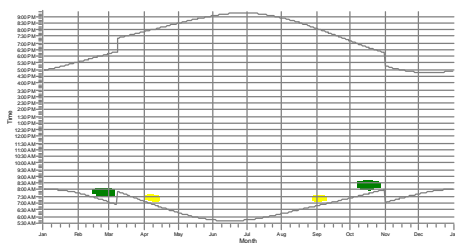
H376: H376



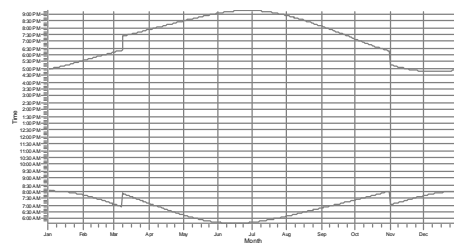
H377: H377



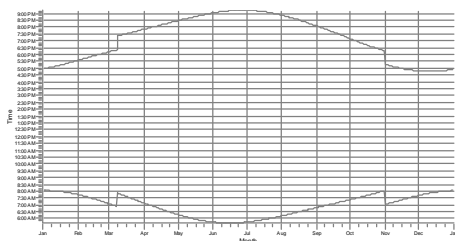
H378: H378



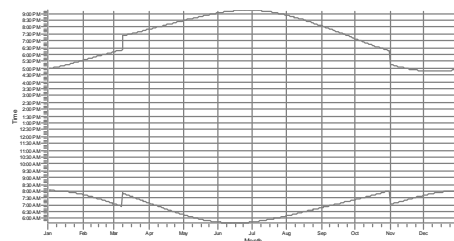
H379: H379



H380: H380



H381: H381



WTGs

1: Primary 2: Primary

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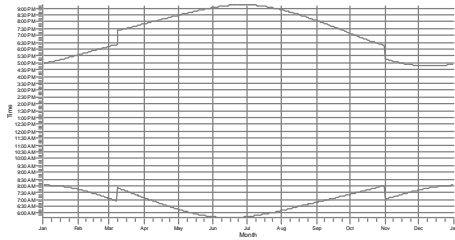
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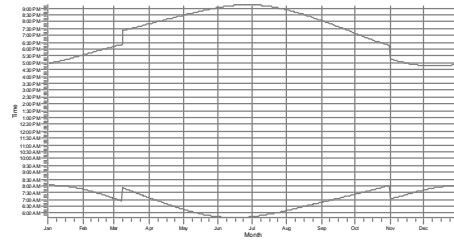
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

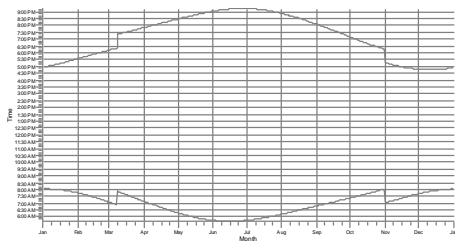
H382: H382



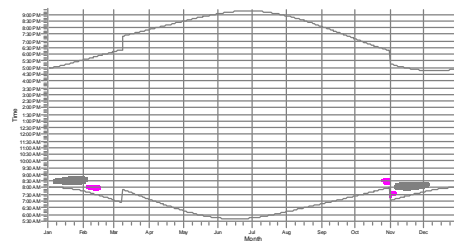
H383: H383



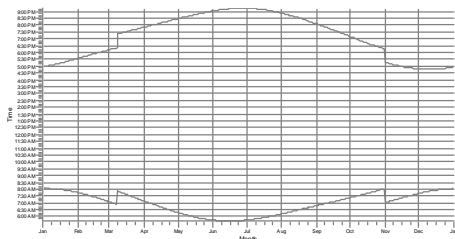
H384: H384



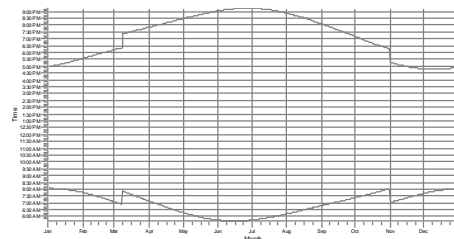
H385: H385



H386: H386



H387: H387



WTGs

4: Primary 5: Primary

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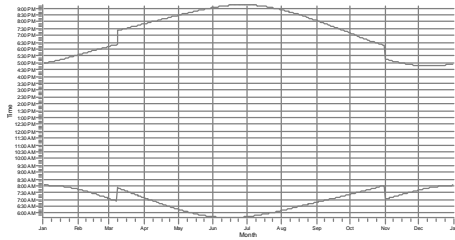
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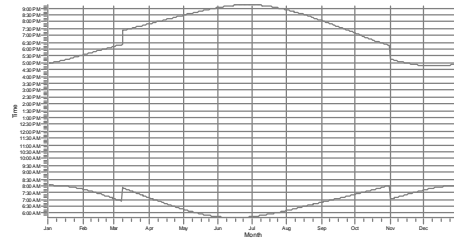
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

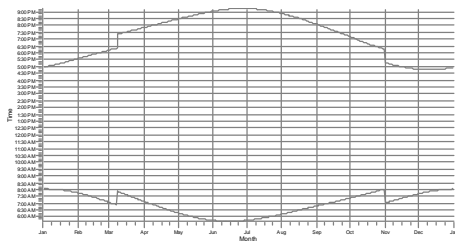
H388: H388



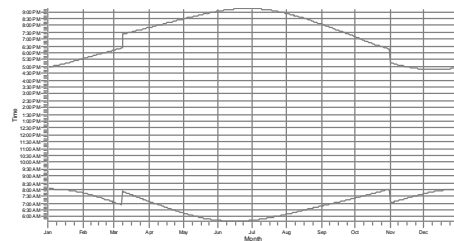
H389: H389



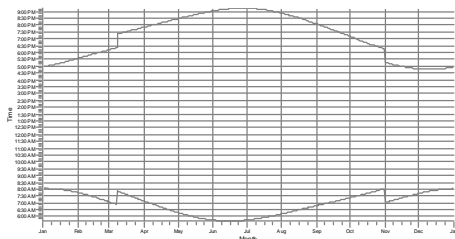
H390: H390



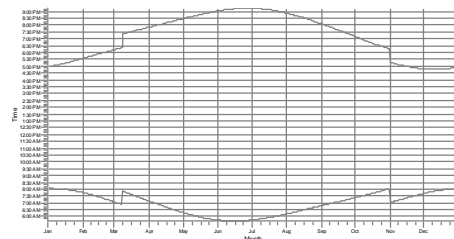
H391: H391



H392: H392



H393: H393



WTGs

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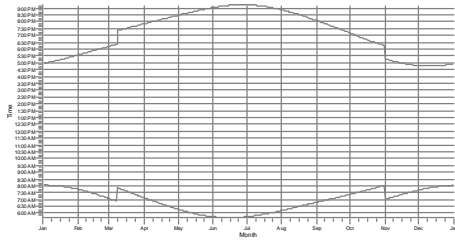
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Calculated:
6/27/2016 2:32 PM/3.0.654

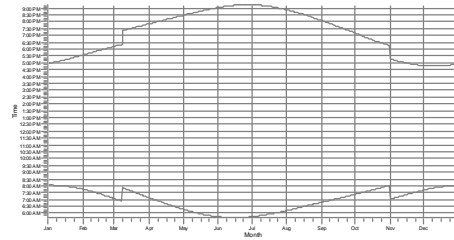
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

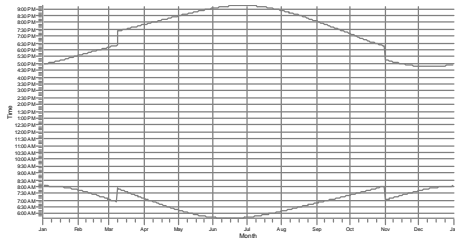
H394: H394



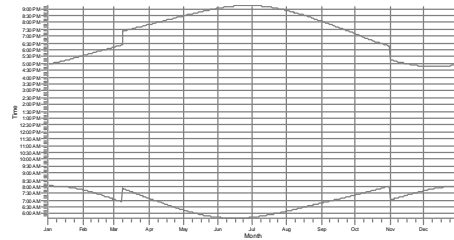
H395: H395



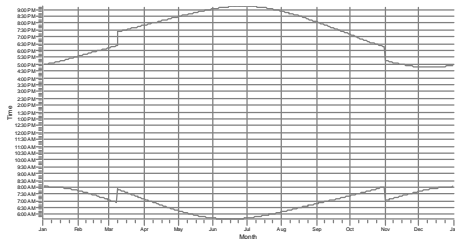
H396: H396



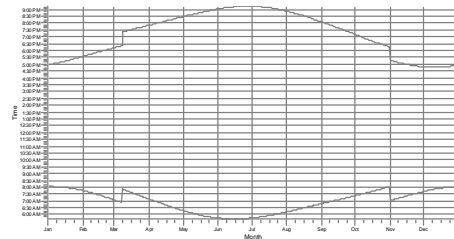
H397: H397



H398: H398



H399: H399



WTGs

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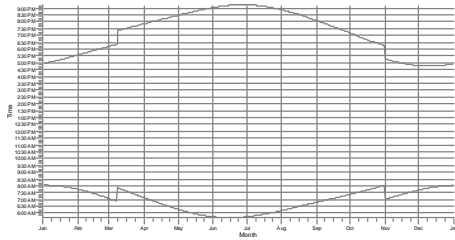
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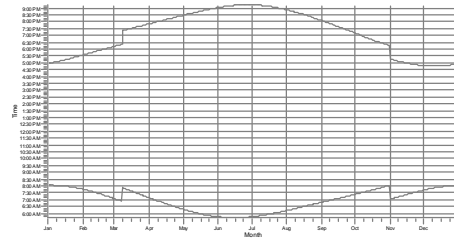
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

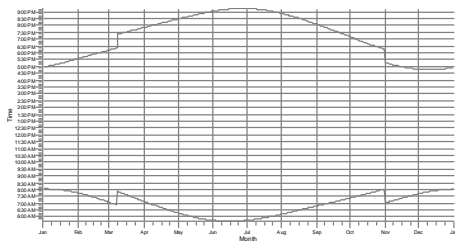
H400: H400



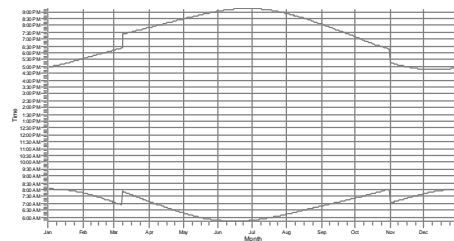
H401: H401



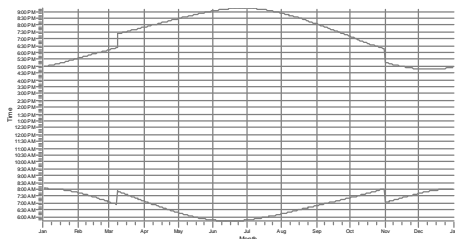
H402: H402



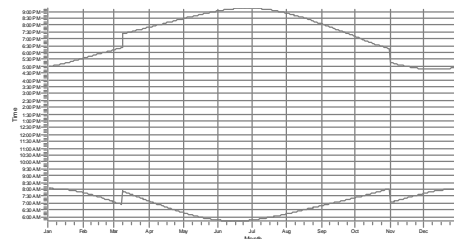
H403: H403



H404: H404



H405: H405



WTGs

Project:

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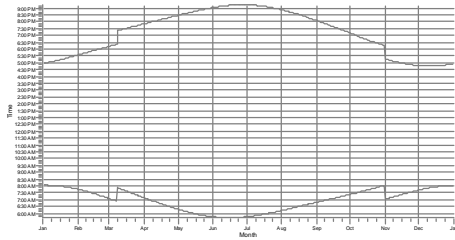
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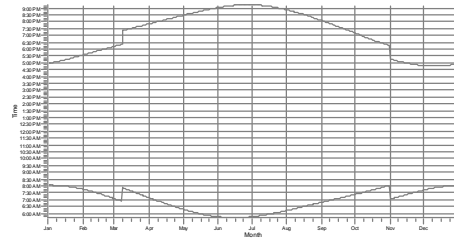
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

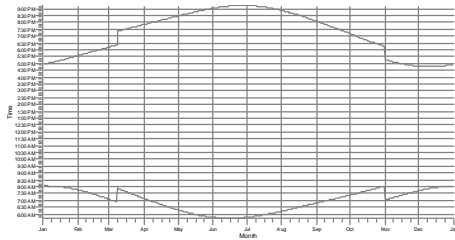
H406: H406



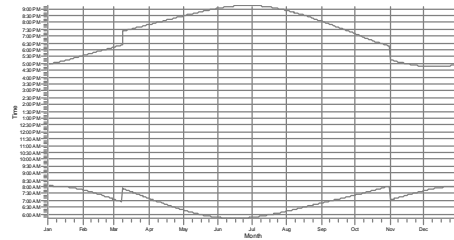
H407: H407



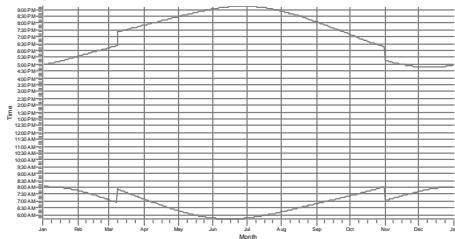
H408: H408



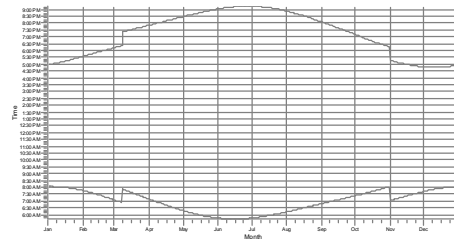
H409: H409



H410: H410



H411: H411



WTGs

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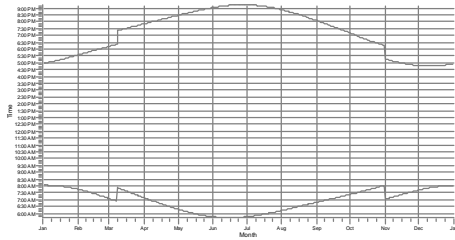
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Calculated:
6/27/2016 2:32 PM/3.0.654

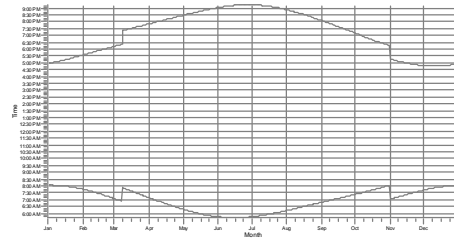
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

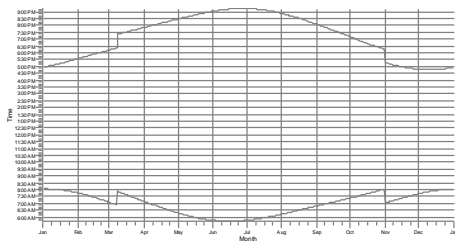
H412: H412



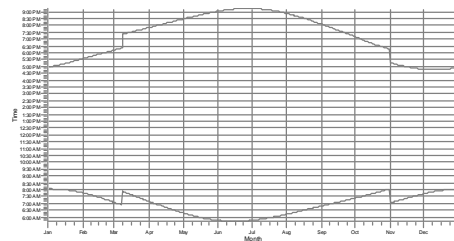
H413: H413



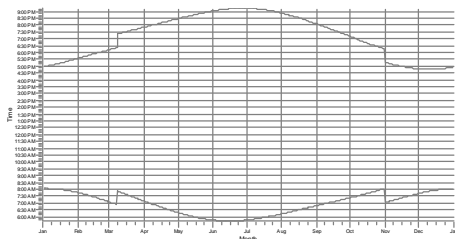
H414: H414



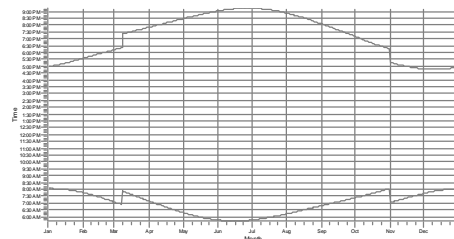
H415: H415



H416: H416



H417: H417



WTGs

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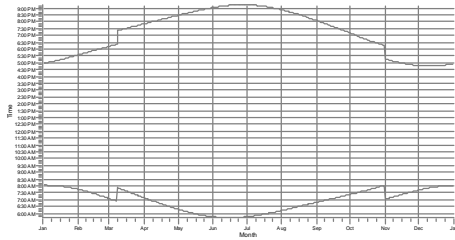
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6/27/2016 2:32 PM/3.0.654

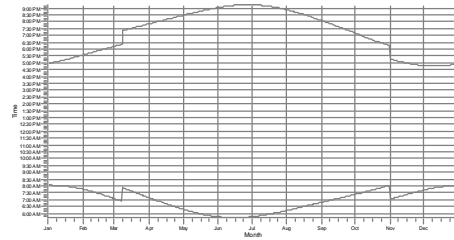
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

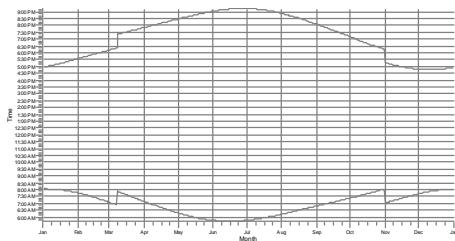
H418: H418



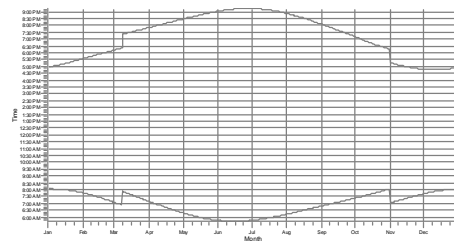
H419: H419



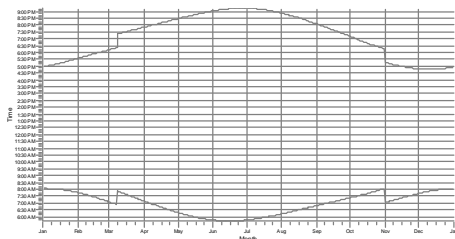
H420: H420



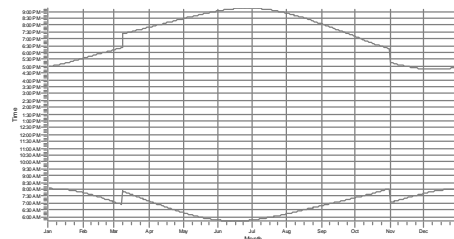
H421: H421



H422: H422



H423: H423



WTGs

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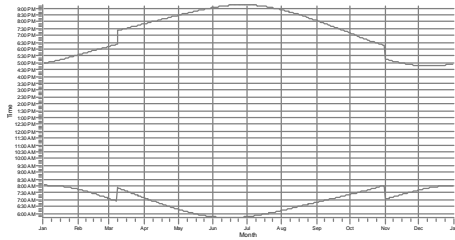
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Calculated:
6/27/2016 2:32 PM/3.0.654

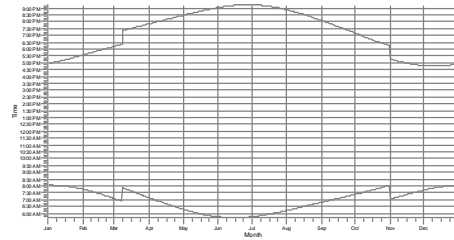
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

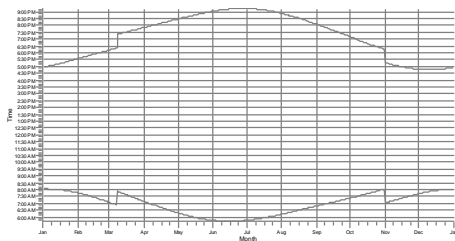
H424: H424



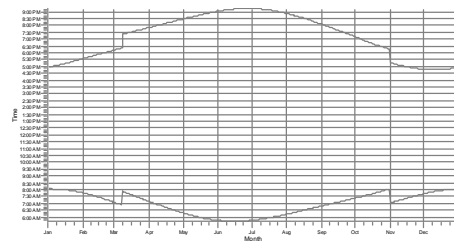
H425: H425



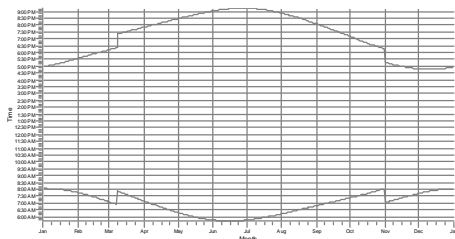
H426: H426



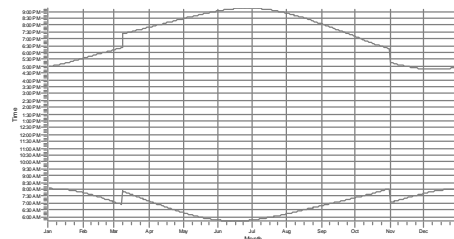
H427: H427



H428: H428



H429: H429



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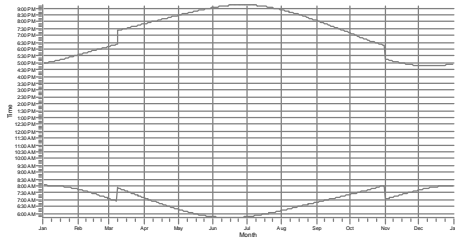
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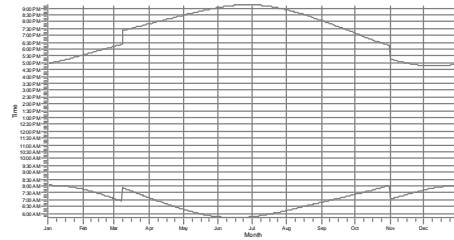
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

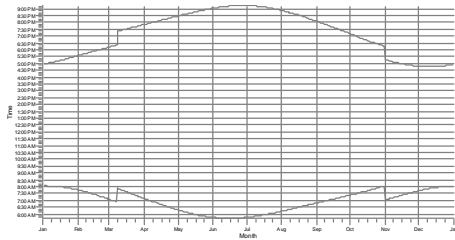
H430: H430



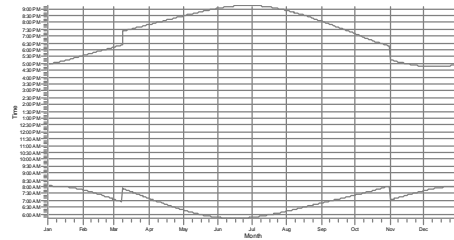
H431: H431



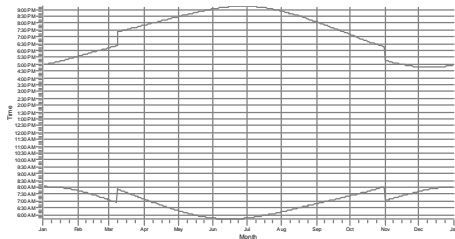
H432: H432



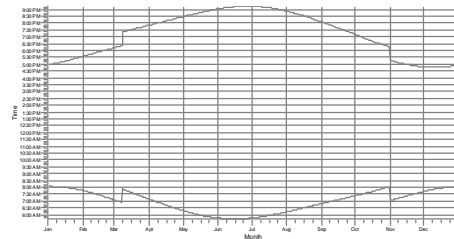
H433: H433



H434: H434



H435: H435



WTGs

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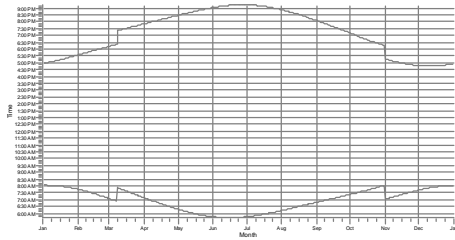
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Calculated:
6/27/2016 2:32 PM/3.0.654

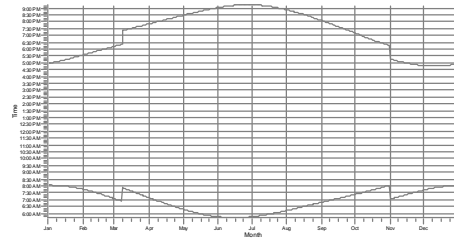
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

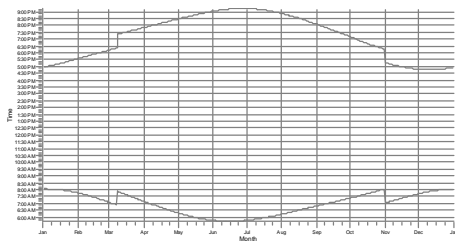
H436: H436



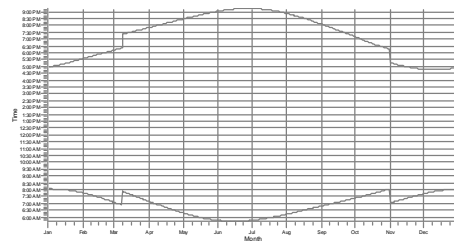
H437: H437



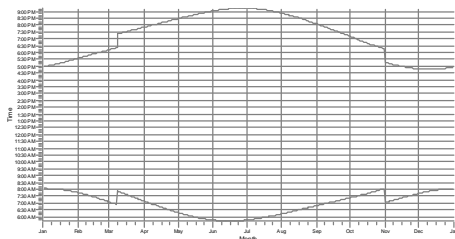
H438: H438



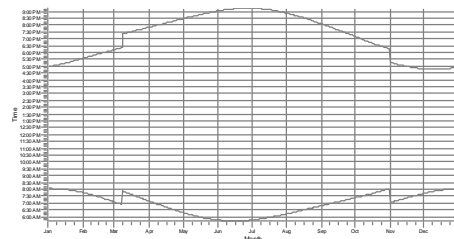
H439: H439



H440: H440



H441: H441



WTGs

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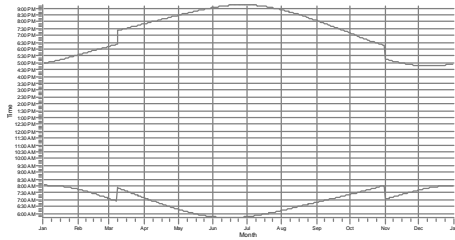
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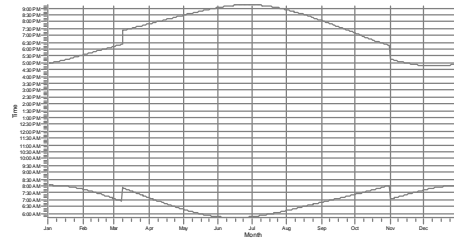
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

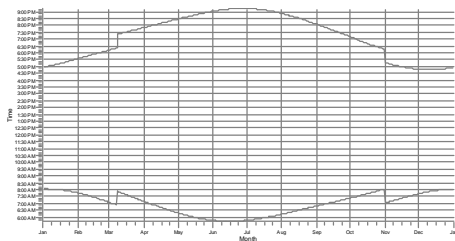
H442: H442



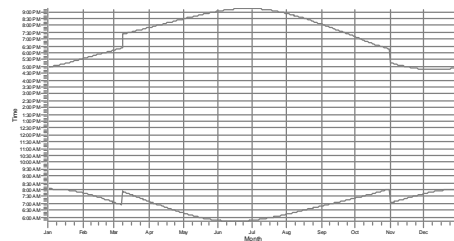
H443: H443



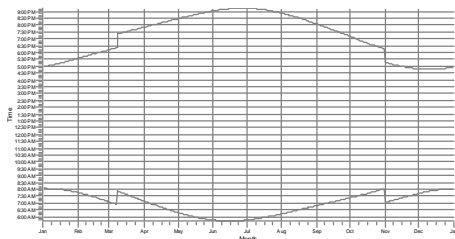
H444: H444



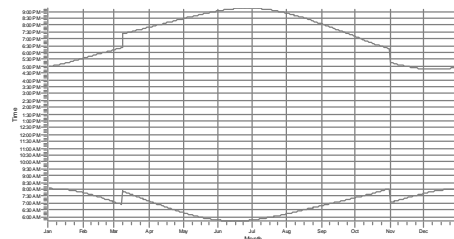
H445: H445



H446: H446



H447: H447



WTGs

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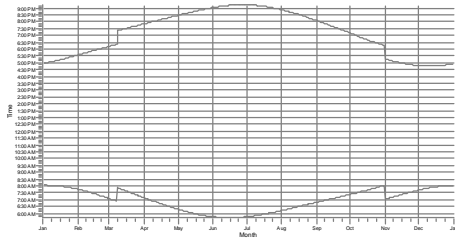
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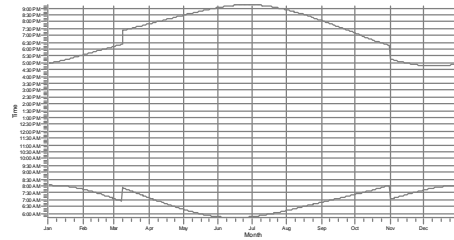
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

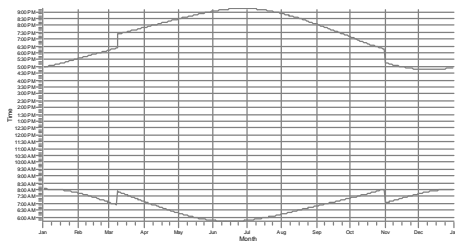
H448: H448



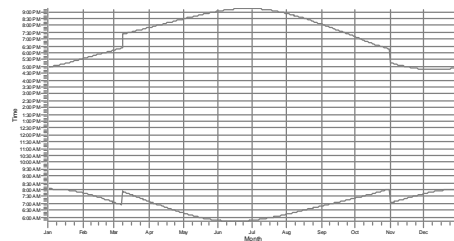
H449: H449



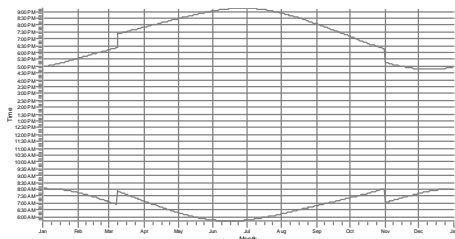
H450: H450



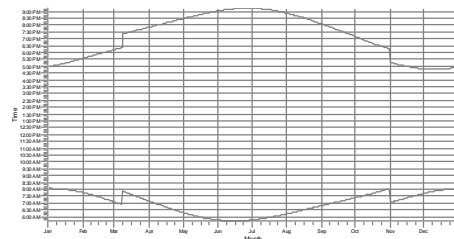
H451: H451



H452: H452



H453: H453



WTGs

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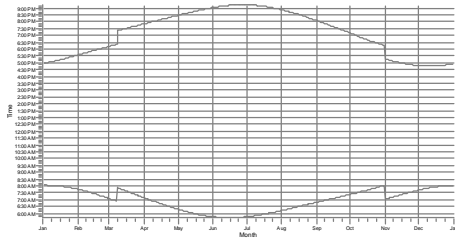
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Calculated:
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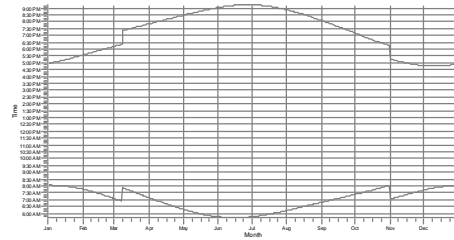
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

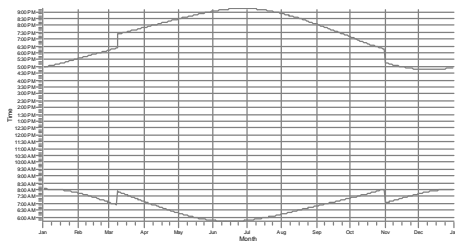
H454: H454



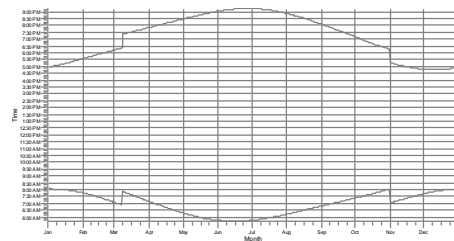
H455: H455



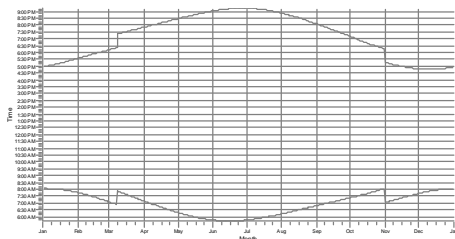
H456: H456



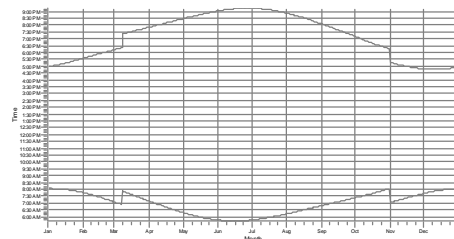
H457: H457



H458: H458



H459: H459



WTGs

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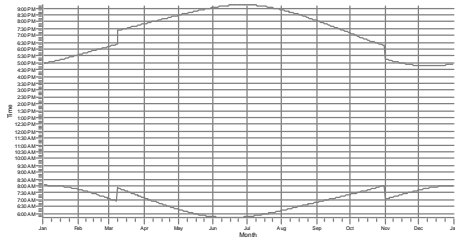
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Calculated:
6/27/2016 2:32 PM/3.0.654

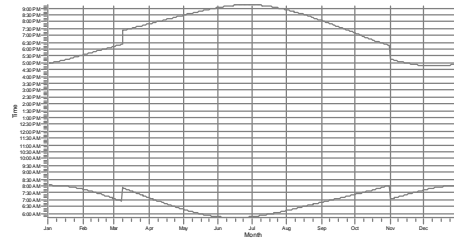
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

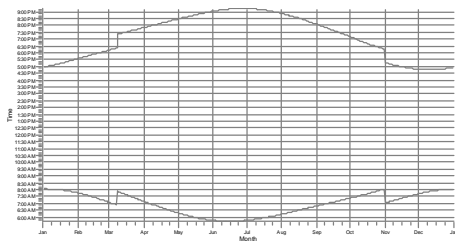
H460: H460



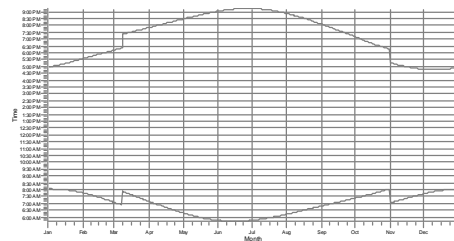
H461: H461



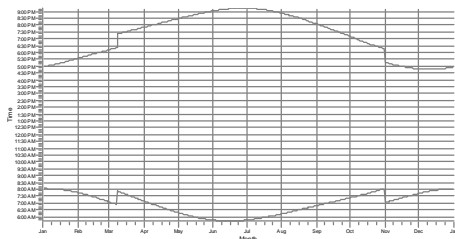
H462: H462



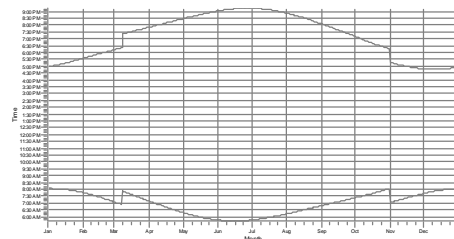
H463: H463



H464: H464



H465: H465



WTGs

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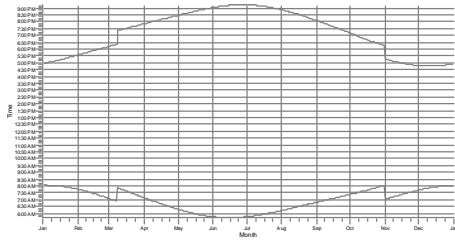
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6/27/2016 2:32 PM/3.0.654

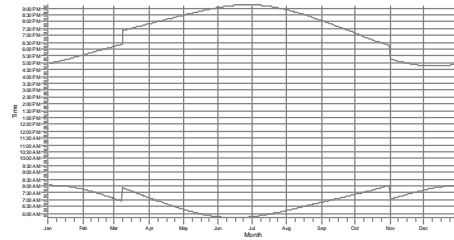
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

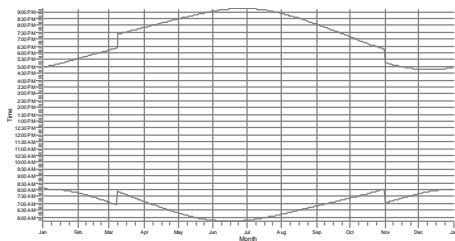
H466: H466



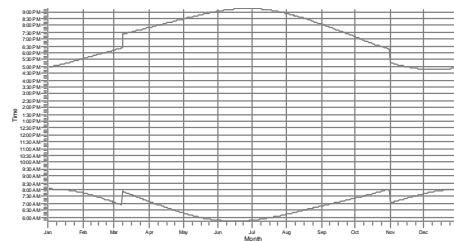
H467: H467



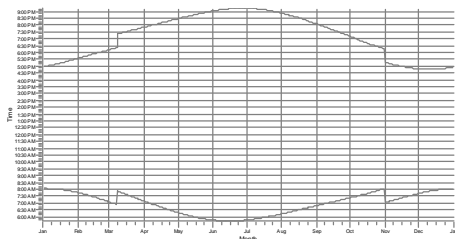
H468: H468



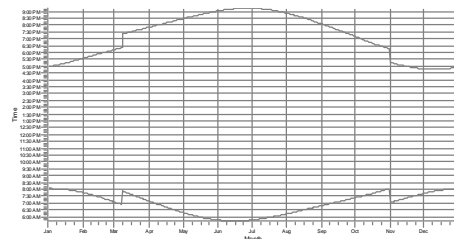
H469: H469



H470: H470



H471: H471



WTGs

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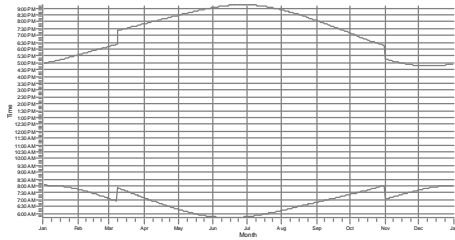
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6/27/2016 2:32 PM/3.0.654

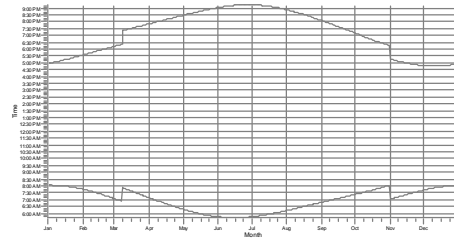
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

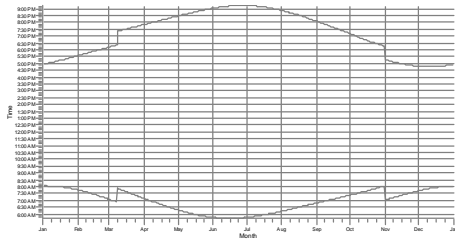
H472: H472



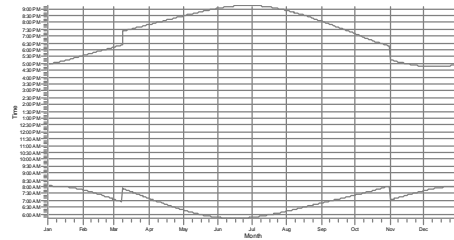
H473: H473



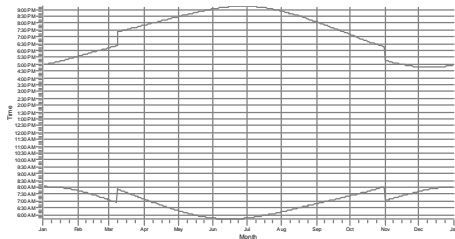
H474: H474



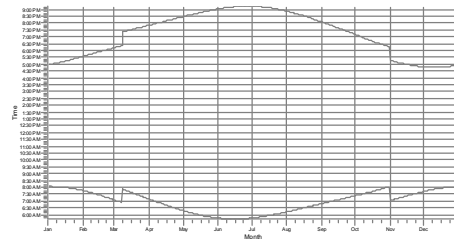
H475: H475



H476: H476



H477: H477



WTGs

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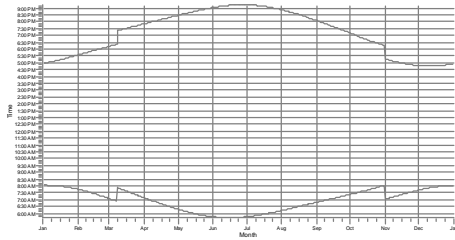
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Calculated:
6/27/2016 2:32 PM/3.0.654

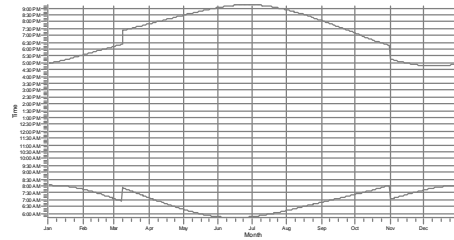
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

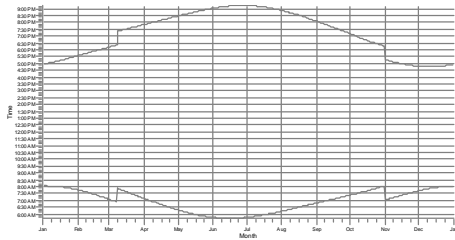
H478: H478



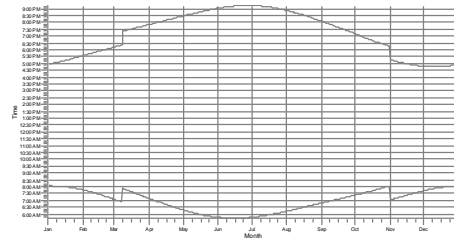
H479: H479



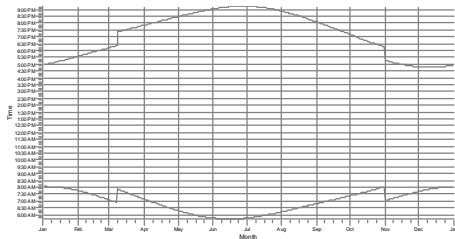
H480: H480



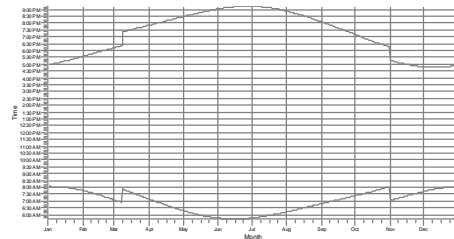
H481: H481



H482: H482



H483: H483



WTGs

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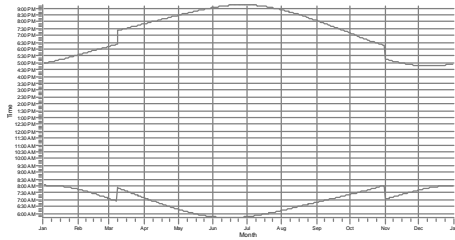
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6/27/2016 2:32 PM/3.0.654

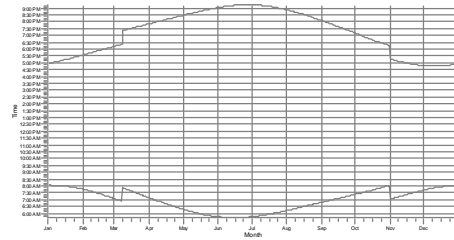
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

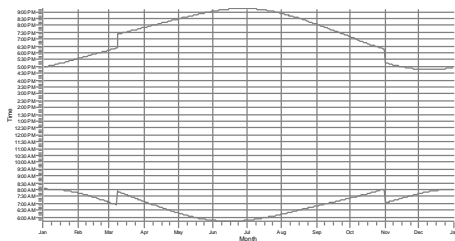
H484: H484



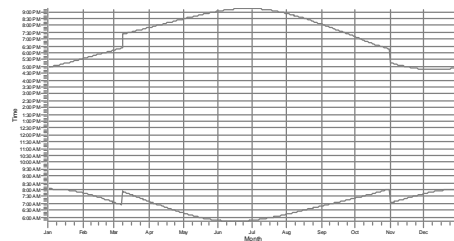
H485: H485



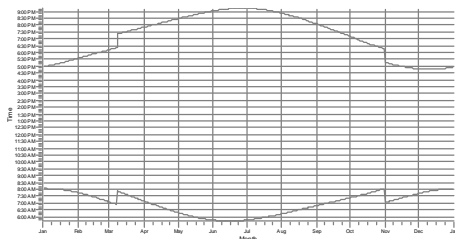
H486: H486



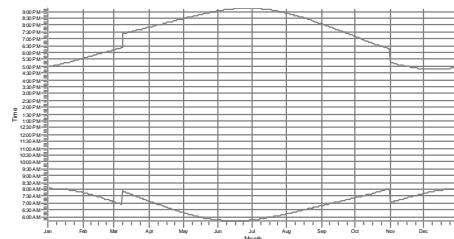
H487: H487



H488: H488



H489: H489



WTGs

Project:

20162030 Westwood Red Pine

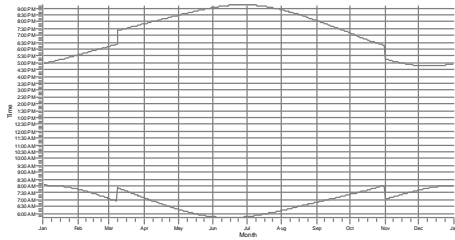
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

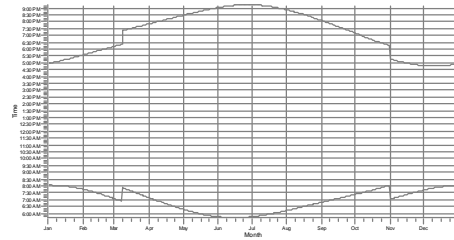
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

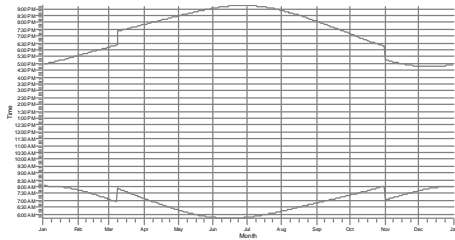
H490: H490



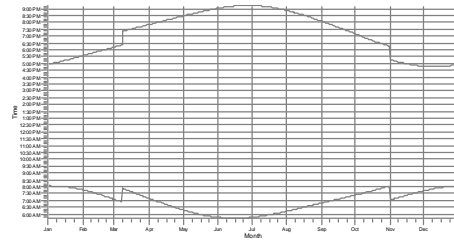
H491: H491



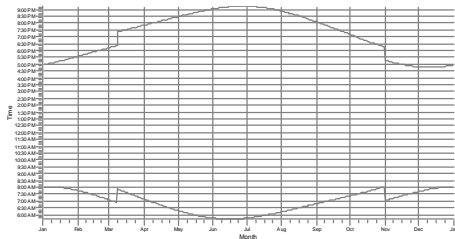
H492: H492



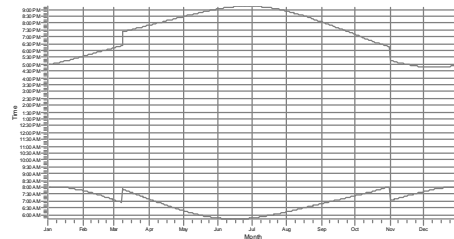
H493: H493



H494: H494



H495: H495



WTGs

Project:

20162030 Westwood Red Pine

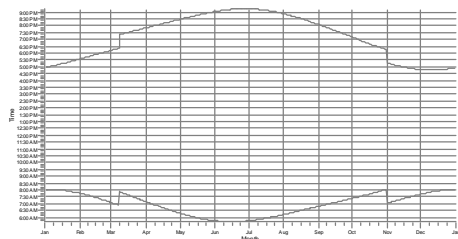
Licensed user:

EAPC Wind Energy
3100 DeMers Avenue
US-GRAND FORKS, ND 58201
+1 701 775 3000
Jay Haley / jhaley@eapc.net
Calculated:
6/27/2016 2:32 PM/3.0.654

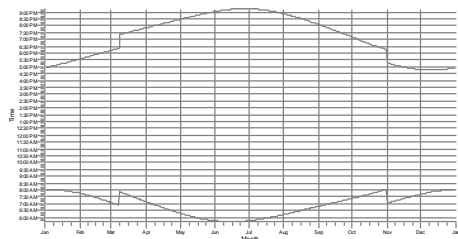
SHADOW - Calendar, graphical

Calculation: V100-2.0 80m HH v26

H496: H496



H497: H497



WTGs