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PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Afton	AFT_TR01	AFT314	0.25	Unintentional Islanding - min	6.87	Unintentional Islanding - max		16,691	14,004		9,040	7,190	Yes	LTC	No	Radial	509.24	2,036.51	298.92	2,029.31	7/1/2021	Nov-21	
Afton	AFT_TR01	AFT315	0.10	Thermal for Gen - min	5.03	Unintentional Islanding - max		16,691	14,004		7,900	7,018	Yes	LTC	No	Radial	509.24	2,036.51	210.32	7.20	7/1/2021	Nov-21	
Afton	AFT_TR02	AFT321	0.20	Thermal for Gen - min	6.13	Unintentional Islanding - max		12,745	10,124		9,173	7,048	Yes	LTC	No	Radial	356.87	4,000.00	271.63	1,000.00	7/1/2021	Nov-21	
Afton	AFT_TR02	AFT322	2.20	Thermal for Gen - min	2.71	Unintentional Islanding - max		12,745	10,124		3,799	3,274	Yes	LTC	No	Radial	356.87	4,000.00	85.24	3,000.00	7/1/2021	Nov-21	
Arden Hills	AHI_TR01	AHI021	0.20	Primary Over-Voltage - min	0.30	Primary Over-Voltage - max		5,580	4,708		2,047	1,974	Yes	Regulator	No	Radial	503.19	6.63	87.38	0.00	1/1/2021	Aug-21	
Arden Hills	AHI_TR01	AHI022	0.10	Primary Over-Voltage - min	0.20	Primary Over-Voltage - max		5,580	4,708		1,392	1,388	Yes	Regulator	No	Radial	503.19	6.63	220.20	6.63	1/1/2021	Aug-21	
Arden Hills	AHI_TR01	AHI024	0.30	Primary Over-Voltage - min	0.30	Primary Over-Voltage - max		5,580	4,708		2,907	2,855	Yes	Regulator	No	Radial	503.19	6.63	5.00	0.00	1/1/2021	Aug-21	
Arden Hills	AHI_TR01	AHI025	0.30	Primary Over-Voltage - min	0.30	Primary Over-Voltage - max		5,580	4,708		2,489	2,360	Yes	Regulator	No	Radial	503.19	6.63	190.61	0.00	1/1/2021	Aug-21	
Arden Hills	AHI_TR02	AHI063	0.03	Unintentional Islanding - min	2.06	Unintentional Islanding - max		4,664	3,865		3,121	3,087	Yes	Regulator	No	Radial	54.78	5.00	54.78	5.00	1/1/2021	Aug-21	
Airport	AIR_TR01	AIR060	0.20	Thermal for Gen - min	1.32	Unintentional Islanding - max		9,358	9,349		1,096	1,047	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR01	AIR061	0.86	Unintentional Islanding - min	0.86	Unintentional Islanding - max		9,358	9,349		1,807	1,703	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR01	AIR069	0.89	Unintentional Islanding - min	0.89	Unintentional Islanding - max		9,358	9,349		1,245	1,245	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR02	AIR072	0.96	Unintentional Islanding - min	0.96	Unintentional Islanding - max		10,131	9,270		1,601	1,456	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR02	AIR073	0.40	Thermal for Gen - min	0.57	Unintentional Islanding - max		10,131	9,270		1,116	987	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR02	AIR074	1.18	Unintentional Islanding - min	1.18	Unintentional Islanding - max		10,131	9,270		5,272	3,602	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR02	AIR077	1.38	Unintentional Islanding - min	1.38	Unintentional Islanding - max		10,131	9,270		2,557	2,052	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR02	AIR078	0.23	Unintentional Islanding - min	0.23	Unintentional Islanding - max		10,131	9,270		922	922	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR02	AIR079	0.95	Unintentional Islanding - min	0.95	Unintentional Islanding - max		10,131	9,270		100	100	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Airport	AIR_TR02	AIR62X	1.03	Unintentional Islanding - min	1.03	Unintentional Islanding - max		10,131	9,270		1,012	1,012	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Albany	ALB_TR02	ALB021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		2,582	1,582		2,107	1,735	Yes	Regulator	No	Radial	13,059.49	4,000.00	2,039.50	0.00	7/1/2020	Nov-20	
Albany	ALB_TR02	ALB022	0.00	Thermal for Gen - min	0.00	Breaker Relay Reduction of Reach - max		2,582	1,582		1,342	1,113	Yes	Regulator	Yes	Radial	13,059.49	4,000.00	1,019.99	4,000.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Albany	ALB_TR02	ALB023	0.00	Primary Over-Voltage - min	0.30	Breaker Relay Reduction of Reach - max		2,582	1,582		300	300	No	Regulator	Yes	Radial	13,059.49	4,000.00	10,000.00	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Aldrich	ALD_TR02	ALD072	0.50	Thermal for Gen - min	1.74	Reverse Power Flow - max		7,889	6,554		2,363	1,895	Yes	LTC	No	Radial	325.68	14.21	80.51	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR02	ALD073	0.14	Reverse Power Flow - min	0.14	Reverse Power Flow - max		7,889	6,554		3,178	2,609	Yes	LTC	No	Radial	325.68	14.21	89.74	14.21	7/1/2020	Nov-20	
Aldrich	ALD_TR02	ALD075	0.89	Reverse Power Flow - min	0.89	Reverse Power Flow - max		7,889	6,554		351	328	Yes	LTC	No	Radial	325.68	14.21	0.00	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR02	ALD076	0.20	Thermal for Gen - min	0.72	Breaker Relay Reduction of Reach - max		7,889	6,554		2,571	2,280	Yes	LTC	No	Radial	325.68	14.21	155.43	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR03	ALD081	0.51	Reverse Power Flow - min	0.51	Reverse Power Flow - max		18,182	14,690		671	608	Yes	LTC	No	Radial	642.37	27.31	2.50	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR03	ALD082	0.90	Thermal for Gen - min	1.60	Reverse Power Flow - max		18,182	14,690		2,121	2,040	Yes	LTC	No	Radial	642.37	27.31	202.45	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR03	ALD083	0.10	Thermal for Gen - min	0.54	Breaker Relay Reduction of Reach - max		18,182	14,690		1,663	1,372	Yes	LTC	No	Radial	642.37	27.31	2.80	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR03	ALD084	0.90	Thermal for Gen - min	1.57	Reverse Power Flow - max		18,182	14,690		2,162	1,869	Yes	LTC	No	Radial	642.37	27.31	135.80	27.31	7/1/2020	Nov-20	
Aldrich	ALD_TR03	ALD085	0.50	Thermal for Gen - min	1.84	Reverse Power Flow - max		18,182	14,690		2,844	2,247	Yes	LTC	No	Radial	642.37	27.31	155.99	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR03	ALD086	0.65	Reverse Power Flow - min	0.65	Reverse Power Flow - max		18,182	14,690		806	594	Yes	LTC	No	Radial	642.37	27.31	17.50	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR03	ALD087	1.67	Reverse Power Flow - min	1.67	Reverse Power Flow - max		18,182	14,690		2,203	1,946	Yes	LTC	No	Radial	642.37	27.31	0.00	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR03	ALD088	0.90	Thermal for Gen - min	1.13	Reverse Power Flow - max		18,182	14,690		1,663	1,372	Yes	LTC	No	Radial	642.37	27.31	125.33	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR04	ALD091	0.82	Reverse Power Flow - min	0.82	Reverse Power Flow - max		18,828	15,281		1,218	945	Yes	LTC	No	Radial	1,618.14	312.50	34.20	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR04	ALD092	0.90	Thermal for Gen - min	3.92	Reverse Power Flow - max		18,828	15,281		5,332	4,029	Yes	LTC	No	Radial	1,618.14	312.50	42.04	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR04	ALD093	0.74	Reverse Power Flow - min	0.74	Reverse Power Flow - max		18,828	15,281		561	516	Yes	LTC	No	Radial	1,618.14	312.50	17.22	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR04	ALD094	0.50	Thermal for Gen - min	1.18	Reverse Power Flow - max		18,828	15,281		1,814	1,799	Yes	LTC	No	Radial	1,618.14	312.50	1,140.00	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR04	ALD095	0.90	Thermal for Gen - min	2.11	Reverse Power Flow - max		18,828	15,281		2,777	2,285	Yes	LTC	No	Radial	1,618.14	312.50	70.12	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR04	ALD096	0.50	Thermal for Gen - min	1.04	Reverse Power Flow - max		18,828	15,281		1,218	945	Yes	LTC	No	Radial	1,618.14	312.50	0.00	0.00	7/1/2020	Nov-20	
Aldrich	ALD_TR04	ALD097	0.90	Thermal for Gen - min	1.76	Reverse Power Flow - max		18,828	15,281		2,404	1,964	Yes	LTC	No	Radial	1,618.14	312.50	214.57	312.50	7/1/2020	Nov-20	
Aldrich	ALD_TR04	ALD098	0.39	Reverse Power Flow - min	0.39	Reverse Power Flow - max		18,828	15,281		561	516	Yes	LTC	No	Radial	1,618.14	312.50	100.00	0.00	7/1/2020	Nov-20	
Air Lake	ALK_TR01	ALK063	0.90	Primary Over-Voltage - min	2.46	Unintentional Islanding - max		9,024	8,437		2,052	2,052	No	LTC	No	Radial	213.25	0.00	57.40	0.00	1/1/2021	Aug-21	
Air Lake	ALK_TR01	ALK064	0.50	Thermal for Gen - min	1.34	Unintentional Islanding - max		9,024	8,437		1,672	1,672	No	LTC	No	Radial	213.25	0.00	6.05	0.00	1/1/2021	Aug-21	
Air Lake	ALK_TR01	ALK067	1.00	Thermal for Gen - min	1.46	Unintentional Islanding - max		9,024	8,437		1,448	1,448	No	LTC	No	Radial	213.25	0.00	149.80	0.00	1/1/2021	Aug-21	
Air Lake	ALK_TR02	ALK072	0.50	Primary Over-Voltage - min	2.33	Unintentional Islanding - max		5,635	5,635		2,273	2,273	No	LTC	No	Radial	256.64	0.00	256.64	0.00	1/1/2021	Aug-21	
Air Lake	ALK_TR02	ALK073	1.10	Thermal for Gen - min	1.90	Unintentional Islanding - max		5,635	5,635		1,805	1,805	No	LTC	No	Radial	256.64	0.00	0.00	0.00	1/1/2021	Aug-21	
Altura	ALT_TR01	ALT021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,081	1,081		1,081	1,081	No	Regulator	Yes	Radial	4,681.92	2,043.20	4,681.92	2,043.20	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Annandale	ANN_TR01	ANN021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		2,098	2,098		2,098	2,098	No	Regulator	Yes	Radial	6,020.59	1,000.00	6,020.59	1,000.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Apache	APA_TR01	APA061	0.90	Thermal for Gen - min	1.81	Reverse Power Flow - max		10,500	8,373		2,668	2,159	Yes	LTC	No	Radial	113.52	0.00	25.58	0.00	7/1/2020	Nov-20	
Apache	APA_TR01	APA064	0.84	Reverse Power Flow - min	0.84	Reverse Power Flow - max		10,500	8,373		1,285	1,000	Yes	LTC	No	Radial	113.52	0.00	0.00	0.00	7/1/2020	Nov-20	
Apache	APA_TR01	APA065	0.90	Thermal for Gen - min	1.58	Reverse Power Flow - max		10,500	8,373		2,234	2,195	Yes	LTC	No	Radial	113.52	0.00	5.58	0.00	7/1/2020	Nov-20	
Apache	APA_TR01	APA067	0.50	Thermal for Gen - min	1.50	Reverse Power Flow - max		10,500	8,373		1,934	1,854	Yes	LTC	No	Radial	113.52	0.00	19.35	0.00	7/1/2020	Nov-20	
Apache	APA_TR01	APA068	0.60	Thermal for Gen - min	0.95	Reverse Power Flow - max		10,500	8,373		1,416	1,000	Yes	LTC	No	Radial	113.52	0.00	48.60	0.00	7/1/2020	Nov-20	
Apache	APA_TR01	APA069	0.60	Reverse Power Flow - min	0.60	Reverse Power Flow - max		10,500	8,373		848	711	Yes	LTC	No	Radial	113.52	0.00	14.40	0.00	7/1/2020	Nov-20	
Apache	APA_TR02	APA071	0.60	Thermal for Gen - min	1.78	Reverse Power Flow - max		17,922	14,572		2,309	1,879	Yes	LTC	No	Radial	515.53	6.00	128.49	0.00	7/1/2020	Nov-20	
Apache	APA_TR02	APA072	0.90	Thermal for Gen - min	1.15	Reverse Power Flow - max		17,922	14,572		2,062	1,649	Yes	LTC	No	Radial	515.53	6.00	20.00	0.00	7/1/2020	Nov-20	
Apache	APA_TR02	APA073	0.90	Thermal for Gen - min	1.27	Reverse Power Flow - max		17,922	14,572		1,645	1,645	Yes	LTC	No	Radial	515.53	6.00	41.09	0.00	7/1/2020	Nov-20	
Apache	APA_TR02	APA074	0.90	Thermal for Gen - min	2.24	Reverse Power Flow - max		17,922	14,572		2,913	2,675	Yes	LTC	No	Radial	515.53	6.00	4.93	0.00	7/1/2020	Nov-20	
Apache	APA_TR02	APA075	0.90	Thermal for Gen - min	1.58	Reverse Power Flow - max		17,922	14,572		2,247	1,955	Yes	LTC	No	Radial	515.53	6.00	120.36	0.00	7/1/2020	Nov-20	
Apache	APA_TR02	APA076	0.80	Thermal for Gen - min	1.42	Reverse Power Flow - max		17,922	14,572		1,946	1,396	Yes	LTC	No	Radial	515.53	6.00	81.91	0.00	7/1/2020	Nov-20	
Apache	APA_TR02	APA077	1.34	Reverse Power Flow - min	1.34	Reverse Power Flow - max		17,922	14,572		2,012	1,812	Yes	LTC	No	Radial	515.53	6.00	113.59	6.00	7/1/2020	Nov-20	
Apache	APA_TR02	APA078	0.90	Thermal for Gen - min	1.49	Reverse Power Flow - max		17,922	14,572		1,942	1,836	Yes	LTC	No	Radial	515.53	6.00	5.16	0.00	7/1/2020	Nov-20	
Atwater	ATW_TR01	ATW061	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,884	1,884		447	447	No	Regulator	Yes	Radial	5,014.99	1,000.00	5,000.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Atwater	ATW_TR01	ATW062	1.10	Primary Over-Voltage - min	1.22	Reverse Power Flow - max		1,884	1,884		1,437	1,437	No	Regulator	No	Radial	5,014.99	1,000.00	14.99	1,000.00	7/1/2020	Nov-20	
Avon	AVN_TR01	AVN021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,711	1,711		1,711	1,711	No	Regulator	Yes	Radial	5,111.17	0.00	5,111.17	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Averill	AVR_TR01	AVR081	0.10	Thermal for Gen - min	0.86	Unintentional Islanding - max		1,229	-		1,229	-	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Birch	BCH_TR01	BCH311	0.89	Unintentional Islanding - min	0.89	Unintentional Islanding - max		1,204	1,204		836	836	No	Regulator	No	Radial	70.52	5.80	70.52	5.80	1/1/2021	Aug-21	
Battle Creek	BCK_TR01	BCK061	0.44	Unintentional Islanding - min	0.44	Unintentional Islanding - max		11,653	11,468		9,849	9,849	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Battle Creek	BCK_TR01	BCK062	0.72	Unintentional Islanding - min	0.72	Unintentional Islanding - max		11,653	11,468		1,432	1,355	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Battle Creek	BCK_TR02	BCK071	0.82	Unintentional Islanding - min	0.82	Unintentional Islanding - max		1,465	1,440		0	0	No	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Battle Creek	BCK_TR02	BCK72X	0.18	Unintentional Islanding - min	0.18	Unintentional Islanding - max		1,465	1,440		213	135	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Battle Creek	BCK_TR02	BCK073	0.90	Thermal for Gen - min	0.95	Unintentional Islanding - max		1,465	1,440		1,393	1,359	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Battle Creek	BCK_TR02	BCK074	0.10	Unintentional Islanding - min	0.95	Unintentional Islanding - max		1,465	1,440		541	317	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Bassett Creek	BCR_TR01	BCR061	0.90	Thermal for Gen - min	1.83	Unintentional Islanding - max		10,220	8,460		2,530	1,800	Yes	LTC	No	Radial	95.83	1,140.00	22.23	0.00	1/1/2021	Aug-21	
Bassett Creek	BCR_TR01	BCR062	0.90	Thermal for Gen - min	2.73	Unintentional Islanding - max		10,220	8,460		3,660	3,100	Yes	LTC	No	Radial	95.83	1,140.00	32.14	1,140.00	1/1/2021	Aug-21	
Bassett Creek	BCR_TR01	BCR063	0.90	Thermal for Gen - min	1.85	Unintentional Islanding - max		10,220	8,460		2,460	2,460	Yes	LTC	No	Radial	95.83	1,140.00	41.46	0.00	1/1/2021	Aug-21	
Bassett Creek	BCR_TR02	BCR081	0.76	Unintentional Islanding - min	0.76	Unintentional Islanding - max		4,060	4,060		1,120	910	Yes	LTC	No	Radial	15.20	0.00	0.00	0.00	1/1/2021	Aug-21	
Bassett Creek	BCR_TR02	BCR082	0.19	Unintentional Islanding - min	1.33	Unintentional Islanding - max		4,060	4,060		1,870	1,300	Yes	LTC	No	Radial	15.20	0.00	15.20	0.00	1/1/2021	Aug-21	
Bassett Creek	BCR_TR02	BCR083	0.90	Thermal for Gen - min	0.98	Unintentional Islanding - max		4,060	4,060		1,900	1,500	Yes	LTC	No	Radial	15.20	0.00	0.00	0.00	7/1/2021	Nov-21	
Belgrade	BEG_TR01	BEG001	0.10	Primary Over-Voltage - min	0.10	Primary Over-Voltage - max		315	315		315	315	No	Regulator	No	Radial	720.00	0.00	720.00	0.00	7/1/2021	Nov-21	
Becker	BEK_TR01	BEK021	0.10	Primary Over-Voltage - min	0.10	Primary Over-Voltage - max		1,213	1,213		1,213	1,213	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Becker	BEK_TR02	BEK311	0.01	Reverse Power Flow - min	0.01	Reverse Power Flow - max		820	820		820	820	No	Regulator	Yes	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Belle Plain	BEL_TR01	BEL061	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		3,044	3,044		1,879	1,879	No	Regulator	No	Radial	8,993.82	2,018.16	1,043.82	2,018.16	7/1/2020	Nov-20	
Belle Plain	BEL_TR01	BEL062	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		3,044	3,044		1,044	1,044	No	Regulator	Yes	Radial	8,993.82	2,018.16	7,950.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Buffalo Lake	BFL_TR01	BFL021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		525	449		525	449	Yes	Regulator	Yes	Radial	1,000.00	0.00	1,000.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Bird Island	BIS_TR02	BIS001	0.10	Primary Over-Voltage - min	0.46	Unintentional Islanding - max		394	394		394	394	No	Regulator	No	Radial	10.56	0.00	10.56	0.00	1/1/2021	Aug-21	
Bluff Creek	BLC_TR01	BLC061	1.20	Primary Over-Voltage - min	1.29	Reverse Power Flow - max		13,483	11,618		1,626	1,410	Yes	LTC	No	Radial	63.25	11.28	0.00	0.00	7/1/2020	Nov-20	
Bluff Creek	BLC_TR01	BLC062	0.90	Thermal for Gen - min	2.50	Reverse Power Flow - max		13,483	11,618		3,108	2,549	Yes	LTC	No	Radial	63.25	11.28	45.76	11.28	7/1/2020	Nov-20	
Bluff Creek	BLC_TR01	BLC063	1.10	Primary Over-Voltage - min	2.19	Reverse Power Flow - max		13,483	11,618		2,762	2,551	Yes	LTC	No	Radial	63.25	11.28	17.49	0.00	7/1/2020	Nov-20	
Bluff Creek	BLC_TR01	BLC071	1.50	Primary Over-Voltage - min	2.34	Reverse Power Flow - max		13,483	11,618		2,915	2,657	Yes	LTC	No	Radial	63.25	11.28	0.00	0.00	7/1/2020	Nov-20	
Bluff Creek	BLC_TR01	BLC072	0.90	Primary Over-Voltage - min	1.87	Reverse Power Flow - max		13,483	11,618		2,338	2,118	Yes	LTC	No	Radial	63.25	11.28	0.00	0.00	7/1/2020	Nov-20	
Blue Herron	BLH_TR01	BLH061	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,944	1,944		1,432	1,432	No	LTC	Yes	Radial	3,009.75	1,000.00	3,009.75	1,000.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Blue Herron	BLH_TR01	BLH062	0.00	Unintentional Islanding - min	0.00	Unintentional Islanding - max		1,944	1,944		512	512	No	LTC	No	Radial	3,009.75	1,000.00	0.00	0.00	7/1/2021	Nov-21	
Blue Lake	BLL_TR01	BLL062	0.89	Unintentional Islanding - min	0.89	Unintentional Islanding - max		6,438	6,438		1,127	1,127	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Blue Lake	BLL_TR01	BLL063	0.00	Thermal for Gen - min	2.52	Unintentional Islanding - max		6,438	6,438		3,232	3,232	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Blue Lake	BLL_TR01	BLL064	0.00	Unintentional Islanding - min	0.00	Unintentional Islanding - max		6,438	6,438		59	59	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Blue Lake	BLL_TR02	BLL071	0.90	Thermal for Gen - min	1.09	Primary Over-Voltage - max		4,004	3,379		1,404	1,286	Yes	Regulator	Yes	Radial	3,000.00	0.00	3,000.00	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Blue Lake	BLL_TR02	BLL072	0.47	Unintentional Islanding - min	2.73	Unintentional Islanding - max		4,004	3,379		3,516	3,451	Yes	Regulator	No	Radial	3,000.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Brooten	BRO_TR01	BRO021	0.00	Primary Over-Voltage - min	0.40	Primary Over-Voltage - max		988	988		988	988	No	Regulator	Yes	Radial	4,011.00	0.00	4,011.00	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Brooklyn Park	BRP_TR01	BRP061	0.45	Reverse Power Flow - min	0.45	Reverse Power Flow - max		4,130	3,000		810	700	Yes	LTC	No	Radial	1,074.57	0.00	5.00	0.00	1/1/2021	Aug-21	
Brooklyn Park	BRP_TR01	BRP062	0.90	Thermal for Gen - min	1.06	Reverse Power Flow - max		4,130	3,000		1,600	1,400	Yes	LTC	No	Radial	1,074.57	0.00	1,052.30	0.00	1/1/2021	Aug-21	
Brooklyn Park	BRP_TR01	BRP063	0.82	Reverse Power Flow - min	0.82	Reverse Power Flow - max		4,130	3,000		1,100	1,000	Yes	LTC	No	Radial	1,074.57	0.00	17.27	0.00	1/1/2021	Aug-21	
Brooklyn Park	BRP_TR02	BRP071	0.80	Primary Over-Voltage - min	1.03	Reverse Power Flow - max		5,350	4,460		1,610	1,330	Yes	LTC	No	Radial	374.95	80.00	41.75	0.00	1/1/2021	Aug-21	
Brooklyn Park	BRP_TR02	BRP072	0.90	Thermal for Gen - min	1.61	Reverse Power Flow - max		5,350	4,460		1,730	1,500	Yes	LTC	No	Radial	374.95	80.00	253.20	40.00	1/1/2021	Aug-21	
Brooklyn Park	BRP_TR02	BRP073	0.90	Thermal for Gen - min	1.00	Reverse Power Flow - max		5,350	4,460		1,530	1,530	Yes	LTC	No	Radial	374.95	80.00	80.00	40.00	1/1/2021	Aug-21	
Brownton	BRW_TR01	BRW001	0.07	Unintentional Islanding - min	0.07	Unintentional Islanding - max		86	86		86	86	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Butterfield	BTF_TR01	BTF001	0.00	Unintentional Islanding - min	0.00	Unintentional Islanding - max		429	429		381	381	No	Regulator	No	Radial	282.00	0.00	282.00	0.00	7/1/2021	Nov-21	
Burnside	BUR_TR01	BUR022	0.80	Thermal for Gen - min	1.33	Reverse Power Flow - max		3,700	2,980		1,750	1,670	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Burnside	BUR_TR01	BUR023	0.20	Primary Over-Voltage - min	1.45	Reverse Power Flow - max		3,700	2,980		1,890	1,635	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Burnside	BUR_TR02	BUR032	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,906	1,420		1,906	1,420	Yes	LTC	Yes	Radial	9,412.96	0.00	9,412.96	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Baytown	BYT_TR01	BYT061	0.01	Unintentional Islanding - min	0.17	Unintentional Islanding - max		2,886	2,341		2,734	2,283	Yes	LTC	No	Radial	52.88	0.00	52.88	0.00	1/1/2021	Aug-21	
Baytown	BYT_TR02	BYT071	0.66	Unintentional Islanding - min	1.25	Unintentional Islanding - max		4,922	4,123		1,751	1,644	Yes	LTC	No	Radial	71.49	0.00	35.83	0.00	1/1/2021	Aug-21	
Baytown	BYT_TR02	BYT072	0.25	Unintentional Islanding - min	2.14	Unintentional Islanding - max		4,922	4,123		3,029	2,353	Yes	LTC	No	Radial	71.49	0.00	35.66	0.00	1/1/2021	Aug-21	
Cannon Falls	CAF_TR01	CAF021	0.57	Unintentional Islanding - min	0.57	Unintentional Islanding - max		1,126	1,126		540	540	No	LTC	No	Radial	6.00	0.00	6.00	0.00	1/1/2021	Aug-21	
Cannon Falls	CAF_TR01	CAF022	0.30	Thermal for Gen - min	0.60	Unintentional Islanding - max		1,126	1,126		585	585	No	LTC	No	Radial	6.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Cedarvale	CDV_TR01	CDV061	0.80	Primary Over-Voltage - min	0.83	Unintentional Islanding - max		3,358	3,003		694	694	No	Regulator	No	Radial	7.62	0.00	0.00	0.00	1/1/2021	Aug-21	
Cedarvale	CDV_TR01	CDV062	0.92	Unintentional Islanding - min	0.92	Unintentional Islanding - max		3,358	3,003		808	808	No	Regulator	No	Radial	7.62	0.00	0.00	0.00	1/1/2021	Aug-21	
Cedarvale	CDV_TR01	CDV063	0.07	Unintentional Islanding - min	0.85	Unintentional Islanding - max		3,358	3,003		880	880	No	Regulator	No	Radial	7.62	0.00	7.62	0.00	1/1/2021	Aug-21	
Cedarvale	CDV_TR02	CDV071	0.80	Primary Over-Voltage - min	1.83	Unintentional Islanding - max		7,857	6,882		1,770	1,770	No	Regulator	No	Radial	778.13	5.00	750.00	0.00	1/1/2021	Aug-21	
Cedarvale	CDV_TR02	CDV072	0.49	Unintentional Islanding - min	1.98	Unintentional Islanding - max		7,857	6,882		1,904	1,904	No	Regulator	No	Radial	778.13	5.00	28.13	5.00	1/1/2021	Aug-21	
Cedar Lake	CEL_TR01	CEL061	1.00	Primary Over-Voltage - min	1.01	Unintentional Islanding - max		9,199	6,675		2,025	1,450	Yes	LTC	No	Radial	271.01	100.00	0.00	0.00	7/1/2021	Nov-21	
Cedar Lake	CEL_TR01	CEL062	0.90	Thermal for Gen - min	1.01	Unintentional Islanding - max		9,199	6,675		2,089	1,495	Yes	LTC	No	Radial	271.01	100.00	93.94	0.00	7/1/2021	Nov-21	
Cedar Lake	CEL_TR01	CEL063	0.57	Unintentional Islanding - min	0.57	Unintentional Islanding - max		9,199	6,675		765	708	Yes	LTC	No	Radial	271.01	100.00	0.00	0.00	7/1/2021	Nov-21	

PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Cedar Lake	CEL_TR01	CEL064	0.90	Thermal for Gen - min	1.17	Unintentional Islanding - max	[redacted]	9,199	6,675	[redacted]	2,041	1,484	Yes	LTC	No	Radial	271.01	100.00	159.54	100.00	7/1/2021	Nov-21	
Cedar Lake	CEL_TR01	CEL066	0.07	Unintentional Islanding - min	0.81	Unintentional Islanding - max	[redacted]	9,199	6,675	[redacted]	1,392	1,141	Yes	LTC	No	Radial	271.01	100.00	17.53	0.00	7/1/2021	Nov-21	
Cedar Lake	CEL_TR02	CEL071	1.40	Thermal for Gen - min	1.41	Unintentional Islanding - max	[redacted]	5,072	4,377	[redacted]	2,647	2,367	Yes	LTC	No	Radial	72.75	0.00	0.00	0.00	7/1/2021	Nov-21	
Cedar Lake	CEL_TR02	CEL072	0.68	Unintentional Islanding - min	0.68	Unintentional Islanding - max	[redacted]	5,072	4,377	[redacted]	1,499	1,361	Yes	LTC	No	Radial	72.75	0.00	38.75	0.00	7/1/2021	Nov-21	
Cedar Lake	CEL_TR02	CEL075	0.70	Unintentional Islanding - min	0.70	Unintentional Islanding - max	[redacted]	5,072	4,377	[redacted]	1,087	823	Yes	LTC	No	Radial	72.75	0.00	34.00	0.00	7/1/2021	Nov-21	
Cottage Grove	CGR_TR01	CGR061	0.50	Thermal for Gen - min	1.20	Reverse Power Flow - max	[redacted]	15,106	13,179	[redacted]	2,918	2,918	Yes	LTC	Yes	Radial	15,161.93	0.00	1,073.61	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades. Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Cottage Grove	CGR_TR01	CGR062	0.90	Thermal for Gen - min	2.31	Reverse Power Flow - max	[redacted]	15,106	13,179	[redacted]	4,501	3,912	Yes	LTC	No	Radial	15,161.93	0.00	7.62	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Cottage Grove	CGR_TR01	CGR063	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	15,106	13,179	[redacted]	1,801	1,571	Yes	LTC	Yes	Radial	15,161.93	0.00	14,073.78	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades. Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Cottage Grove	CGR_TR01	CGR064	0.90	Thermal for Gen - min	1.82	Reverse Power Flow - max	[redacted]	15,106	13,179	[redacted]	2,729	2,138	Yes	LTC	No	Radial	15,161.93	0.00	6.92	0.00	7/1/2020	Nov-20	
Cottage Grove	CGR_TR02	CGR071	0.88	Reverse Power Flow - min	0.88	Reverse Power Flow - max	[redacted]	6,805	6,805	[redacted]	906	900	Yes	LTC	No	Radial	115.22	7.57	61.24	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Cottage Grove	CGR_TR02	CGR072	0.90	Thermal for Gen - min	1.90	Reverse Power Flow - max	[redacted]	6,805	6,805	[redacted]	2,518	2,508	Yes	LTC	No	Radial	115.22	7.57	38.35	7.57	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Cottage Grove	CGR_TR02	CGR073	2.37	Reverse Power Flow - min	2.37	Reverse Power Flow - max	[redacted]	6,805	6,805	[redacted]	3,202	2,154	Yes	LTC	No	Radial	115.22	7.57	0.00	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Cottage Grove	CGR_TR02	CGR074	0.90	Thermal for Gen - min	1.06	Reverse Power Flow - max	[redacted]	6,805	6,805	[redacted]	1,628	1,315	Yes	LTC	No	Radial	115.22	7.57	15.63	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Chemolite	CHE_TR00	CHE062	0.68	Unintentional Islanding - min	0.68	Unintentional Islanding - max	[redacted]	6,805	6,805	[redacted]	2,786	2,508	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Chemolite	CHE_TR01	CHE063	1.50	Thermal for Gen - min	2.04	Unintentional Islanding - max	[redacted]	6,952	6,008	[redacted]	2,220	1,924	Yes	LTC	No	Radial	759.35	447.30	750.00	0.00	1/1/2021	Aug-21	
Chemolite	CHE_TR01	CHE064	0.60	Thermal for Gen - min	1.55	Unintentional Islanding - max	[redacted]	6,952	6,008	[redacted]	1,924	1,530	Yes	LTC	No	Radial	759.35	447.30	9.35	447.30	1/1/2021	Aug-21	
Chemolite	CHE_TR02	CHE065	0.00	Unintentional Islanding - min	0.00	Unintentional Islanding - max	[redacted]	6,646	6,646	[redacted]	0	0	No	LTC	No	Radial	4,966.90	0.00	0.00	0.00	1/1/2021	Aug-21	
Chemolite	CHE_TR02	CHE075	0.00	Thermal for Gen - min	1.44	Breaker Relay Reduction of Reach - max	[redacted]	6,646	6,646	[redacted]	1,631	1,631	Yes	LTC	Yes	Radial	4,966.90	0.00	4,898.14	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Chemolite	CHE_TR02	CHE076	0.50	Thermal for Gen - min	1.75	Unintentional Islanding - max	[redacted]	6,646	6,646	[redacted]	2,202	1,612	Yes	LTC	No	Radial	4,966.90	0.00	68.76	0.00	1/1/2021	Aug-21	
Chisago Count	CHI_TR02	CHI311	0.00	Primary Over-Voltage - min	2.34	Primary Over-Voltage - max	[redacted]	2,190	2,190	[redacted]	2,190	2,190	Yes	LTC	Yes	Radial	23,665.09	16,027.30	23,665.09	16,027.30	1/1/2021	Aug-21	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades. Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Clarks Grove	CKG_TR01	CKG041	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	360	360	[redacted]	360	360	No	Regulator	No	Radial	334.28	2,000.00	334.28	2,000.00	1/1/2021	Aug-21	
Clara City	CLC_TR01	CLC022	0.10	Unintentional Islanding - min	0.49	Unintentional Islanding - max	[redacted]	544	544	[redacted]	544	544	No	LTC	No	Radial	1,000.00	0.00	1,000.00	0.00	1/1/2021	Aug-21	
Clara City	CLC_TR02	CLC221	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	1,248	1,248	[redacted]	1,248	1,248	No	Regulator	Yes	Radial	3,091.20	0.00	3,091.20	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Coon Creek	CNC_TR01	CNC061	1.70	Primary Over-Voltage - min	2.38	Reverse Power Flow - max	[redacted]	6,327	6,027	[redacted]	3,035	3,026	Yes	LTC	No	Radial	177.89	0.00	0.00	0.00	7/1/2020	Nov-20	
Coon Creek	CNC_TR01	CNC062	1.10	Primary Over-Voltage - min	1.47	Reverse Power Flow - max	[redacted]	6,327	6,027	[redacted]	1,857	1,492	Yes	LTC	No	Radial	177.89	0.00	139.90	0.00	7/1/2020	Nov-20	
Coon Creek	CNC_TR01	CNC063	0.90	Thermal for Gen - min	2.32	Reverse Power Flow - max	[redacted]	6,327	6,027	[redacted]	2,909	2,550	Yes	LTC	No	Radial	177.89	0.00	37.99	0.00	7/1/2020	Nov-20	
Coon Creek	CNC_TR02	CNC071	0.90	Thermal for Gen - min	2.38	Reverse Power Flow - max	[redacted]	8,440	7,327	[redacted]	2,968	2,581	Yes	LTC	No	Radial	682.99	0.00	64.02	0.00	7/1/2020	Nov-20	
Coon Creek	CNC_TR02	CNC072	1.40	Primary Over-Voltage - min	2.81	Reverse Power Flow - max	[redacted]	8,440	7,327	[redacted]	3,522	3,256	Yes	LTC	No	Radial	682.99	0.00	8.64	0.00	7/1/2020	Nov-20	
Coon Creek	CNC_TR02	CNC073	0.90	Primary Over-Voltage - min	1.27	Reverse Power Flow - max	[redacted]	8,440	7,327	[redacted]	1,573	1,395	Yes	LTC	No	Radial	682.99	0.00	610.33	0.00	7/1/2020	Nov-20	
Cokato	COK_TR01	COK061	0.00	Unintentional Islanding - min	1.26	Unintentional Islanding - max	[redacted]	1,293	1,293	[redacted]	1,293	1,293	No	LTC	No	Radial	1,013.38	7,000.00	1,013.38	7,000.00	1/1/2021	Aug-21	
Crystal Foods	CRF_TR01	CRF061	0.40	Reverse Power Flow - min	0.40	Reverse Power Flow - max	[redacted]	1,750	1,750	[redacted]	522	200	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Crystal Foods	CRF_TR01	CRF062	0.20	Thermal for Gen - min	0.81	Reverse Power Flow - max	[redacted]	1,750	1,750	[redacted]	1,260	1,260	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Crooked Lake	CRL_TR01	CRL027	0.04	Unintentional Islanding - min	2.51	Unintentional Islanding - max	[redacted]	12,404	10,032	[redacted]	3,314	2,088	Yes	LTC	No	Radial	15.60	0.00	0.00	0.00	7/1/2021	Nov-21	
Crooked Lake	CRL_TR02	CRL031	0.09	Unintentional Islanding - min	0.83	Unintentional Islanding - max	[redacted]	4,838	3,712	[redacted]	1,315	1,005	Yes	LTC	No	Radial	48.11	0.00	21.38	0.00	7/1/2021	Nov-21	
Crooked Lake	CRL_TR02	CRL033	0.34	Unintentional Islanding - min	1.43	Unintentional Islanding - max	[redacted]	4,838	3,712	[redacted]	1,931	1,616	Yes	LTC	No	Radial	48.11	0.00	26.73	0.00	7/1/2021	Nov-21	
Crooked Lake	CRL_TR01	CRL065	1.40	Thermal for Gen - min	1.60	Unintentional Islanding - max	[redacted]	12,404	10,032	[redacted]	1,204	921	Yes	LTC	No	Radial	15.60	0.00	15.60	0.00	7/1/2021	Nov-21	
Castle Rock	CSR_TR01	CSR001	0.10	Primary Over-Voltage - min	0.10	Unintentional Islanding - max	[redacted]	100	100	[redacted]	80	80	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Cannon Falls T	CTF_TR01	CTF021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	3,769	3,769	[redacted]	1,488	1,055	Yes	LTC	No	Radial	11,015.82	0.00	11,015.82	0.00	7/1/2020	Nov-20	
Cannon Falls T	CTF_TR01	CTF022	0.20	Thermal for Gen - min	1.09	Breaker Relay Reduction of Reach - max	[redacted]	3,769	3,769	[redacted]	2,271	1,945	Yes	LTC	No	Radial	11,015.82	0.00	0.00	0.00	7/1/2020	Nov-20	
Credit River	CTR_TR01	CTR021	0.13	Unintentional Islanding - min	1.68	Unintentional Islanding - max	[redacted]	2,558	1,997	[redacted]	1,811	1,556	Yes	LTC	No	Radial	16.85	0.00	16.85	0.00	1/1/2021	Aug-21	
Credit River	CTR_TR01	CTR022	0.99	Unintentional Islanding - min	0.99	Unintentional Islanding - max	[redacted]	2,558	1,997	[redacted]	1,000	688	Yes	LTC	No	Radial	16.85	0.00	0.00	0.00	1/1/2021	Aug-21	
Credit River	CTR_TR02	CTR031	0.70	Primary Over-Voltage - min	3.10	Unintentional Islanding - max	[redacted]	3,229	2,502	[redacted]	3,229	2,502	Yes	Regulator	No	Radial	120.89	3.75	120.89	3.75	1/1/2021	Aug-21	
Danube	DAN_TR01	DAN021	0.10	Primary Over-Voltage - min	0.11	Unintentional Islanding - max	[redacted]	224	200	[redacted]	224	200	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Dassel	DAS_TR01	DAS061	0.10	Primary Over-Voltage - min	0.59	Reverse Power Flow - max	[redacted]	696	696	[redacted]	696	696	No	Regulator	Yes	Radial	2,036.00	0.00	2,036.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Dayton's Bluff	DBL_TR01	DBL060	0.30	Thermal for Gen - min	0.76	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	2,214	1,910	Yes	LTC	No	Radial	674.40	10.81	0.00	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL061	0.50	Thermal for Gen - min	3.08	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	2,608	2,402	Yes	LTC	No	Radial	674.40	10.81	0.00	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL062	0.90	Thermal for Gen - min	3.71	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	806	707	Yes	LTC	No	Radial	674.40	10.81	0.00	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL063	0.60	Thermal for Gen - min	0.80	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	1,844	1,649	Yes	LTC	No	Radial	674.40	10.81	28.51	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL064	0.90	Thermal for Gen - min	3.90	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	292	292	Yes	LTC	No	Radial	674.40	10.81	540.00	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL065	0.53	Reverse Power Flow - min	0.53	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	2,256	1,897	Yes	LTC	No	Radial	674.40	10.81	27.12	3.19	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL066	0.20	Thermal for Gen - min	1.10	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	707	707	Yes	LTC	No	Radial	674.40	10.81	11.62	7.62	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL067	0.50	Thermal for Gen - min	1.46	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	2,707	2,419	Yes	LTC	No	Radial	674.40	10.81	0.00	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL068	0.60	Primary Over-Voltage - min	0.81	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	2,335	1,910	Yes	LTC	No	Radial	674.40	10.81	67.16	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR01	DBL069	0.60	Thermal for Gen - min	1.00	Reverse Power Flow - max	[redacted]	14,115	12,099	[redacted]	3,306	3,015	Yes	LTC	No	Radial	674.40	10.81	0.00	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR02	DBL072	1.10	Thermal for Gen - min	3.45	Reverse Power Flow - max	[redacted]	13,825	11,809	[redacted]	143	143	Yes	LTC	No	Radial	1,162.11	0.00	0.00	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR02	DBL073	0.50	Reverse Power Flow - min	0.50	Reverse Power Flow - max	[redacted]	13,825	11,809	[redacted]	1,942	1,628	Yes	LTC	No	Radial	1,162.11	0.00	1,032.44	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR02	DBL074	0.89	Reverse Power Flow - min	0.89	Reverse Power Flow - max	[redacted]	13,825	11,809	[redacted]	2,044	1,916	Yes	LTC	No	Radial	1,162.11	0.00	129.67	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR03	DBL081	0.46	Reverse Power Flow - min	0.46	Reverse Power Flow - max	[redacted]	13,188	11,450	[redacted]	1,676	1,315	Yes	LTC	No	Radial	8.49	0.00	8.49	0.00	7/1/2020	Nov-20	
Dayton's Bluff	DBL_TR03	DBL082	0.97	Reverse Power Flow - min	0.97	Reverse Power Flow - max	[redacted]	13,188	11,450	[redacted]	483	459	Yes	LTC	No	Radial	8.49	0.00	0.00	0.00	7/1/2020	Nov-20	
Douglas Count	DGC_TR03	DGC061	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	1,082	762	[redacted]	1,082	762	Yes	Regulator	Yes	Radial	8,051.47	453.00	8,051.47	453.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Dahlgren	DHL_TR01	DHL061	0.30	Thermal for Gen - min	0.98	Reverse Power Flow - max	[redacted]	1,404	1,105	[redacted]	1,404	1,105	Yes	Regulator	No	Radial	49.93	0.00	49.93	0.00	7/1/2020	Nov-20	
Delano	DLO_TR01	DLO021	0.00	Reverse Power Flow - min	0.00	Reverse Power Flow - max	[redacted]	60	60	[redacted]	60	60	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Dundas	DND_TR01	DND061	0.50	Primary Over-Voltage - min	0.94	Reverse Power Flow - max	[redacted]	2,912	2,625	[redacted]	1,649	1,208	Yes	Regulator	No	Radial	7,660.78	0.00	6.00	0.00	7/1/2020	Nov-20	
Dundas	DND_TR01	DND062	0.20	Thermal for Gen - min	0.86	Reverse Power Flow - max	[redacted]	2,912	2,625	[redacted]	1,077	1,019	No	Regulator	Yes	Radial	7,660.78	0.00	7,654.78	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Dundas	DND_TR02	DND071	0.20	Thermal for Gen - min	1.69	Reverse Power Flow - max	[redacted]	4,050	4,274	[redacted]	2,419	1,942	Yes	Regulator	Yes	Radial	48.28	6,000.00	28.58	6,000.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Dundas	DND_TR02	DND072	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	4,050	4,274	[redacted]	1,640	NA	No	Regulator	No	Radial	48.28	6,000.00	19.70	0.00	7/1/2020	Nov-20	
Dodge Center	DOC_TR02	DOC021	0.30	Thermal for Gen - min	1.56	Unintentional Islanding - max	[redacted]	2,125	2,125	[redacted]	2,125	2,125	Yes	Regulator	No	Radial	48.91	0.00	48.91	0.00	1/1/2021	Aug-21	
Dodge Center	DOC_TR03	DOC031	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	1,508	1,508	[redacted]	1,508	1,508	Yes	LTC	Yes	Radial	13,121.10	0.00	13,121.10	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Dodge Center	DOC_TR01	DOC211	0.03	Unintentional Islanding - min	1.59	Unintentional Islanding - max	[redacted]	2,154	2,029	[redacted]	2,154	2,029	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Deephaven	DPN_TR01	DPN061	0.63	Reverse Power Flow - min	0.63	Reverse Power Flow - max	[redacted]	7,012	5,043	[redacted]	845	657	Yes	LTC	No	Radial	5,780.00	0.00	7.20	0.00	7/1/2020	Nov-20	
Deephaven	DPN_TR01	DPN062	0.90	Thermal for Gen - min	1.22	Reverse Power Flow - max	[redacted]	7,012	5,043	[redacted]	1,625	960	Yes	LTC	No	Radial	5,780.00	0.00	772.80	0.00	7/1/2020	Nov-20	
Deephaven	DPN_TR01	DPN063	0.90	Thermal for Gen - min	1.69	Reverse Power Flow - max	[redacted]	7,012	5,043	[redacted]	2,204	1,627	Yes	LTC	No	Radial	5,780.00	0.00	5,000.00	0.00	7/1/2020	Nov-20	
Deephaven	DPN_TR02	DPN071	0.50	Primary Over-Voltage - min	1.12	Reverse Power Flow - max	[redacted]	6,749	5,182	[redacted]	1,451	1,128	Yes	LTC	No	Radial	100.88	0.00	46.16	0.00	7/1/2020	Nov-20	
Deephaven	DPN_TR02	DPN072	0.76	Reverse Power Flow - min	0.76	Reverse Power Flow - max	[redacted]	6,749	5,182	[redacted]	958	958	Yes	LTC	No	Radial	100.88	0.00	50.42	0.00	7/1/2020	Nov-20	
Deephaven	DPN_TR02	DPN073	0.90	Thermal for Gen - min	1.98	Reverse Power Flow - max	[redacted]	6,749	5,182	[redacted]	2,622	2,147	Yes	LTC	No	Radial	100.88	0.00	4.30	0.00	7/1/2020	Nov-20	
East Blooming	EBL_TR01	EBL062	3.60	Unintentional Islanding - min	3.60	Unintentional Islanding - max	[redacted]	10,171	8,240	[redacted]	5,008	4,925	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR01	EBL064	0.13	Unintentional Islanding - min	0.13	Unintentional Islanding - max	[redacted]	10,171	8,240	[redacted]	540	540	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR01	EBL065	0.79	Unintentional Islanding - min	0.79	Unintentional Islanding - max	[redacted]	10,171	8,240	[redacted]	1,600	700	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR01	EBL066	0.40	Unintentional Islanding - min	0.40	Unintentional Islanding - max	[redacted]	10,171	8,240	[redacted]	721	632	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR01	EBL067	0.58	Unintentional Islanding - min	0.58	Unintentional Islanding - max	[redacted]	10,171	8,240	[redacted]	1,204	671	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR02	EBL071	1.40	Thermal for Gen - min	1.51	Unintentional Islanding - max	[redacted]	14,159	12,021	[redacted]	2,010	1,910	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR02	EBL072	1.26	Unintentional Islanding - min	1.26	Unintentional Islanding - max	[redacted]	14,159	12,021	[redacted]	1,581	1,389	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR02	EBL073	0.71	Unintentional Islanding - min	0.71	Unintentional Islanding - max	[redacted]	14,159	12,021	[redacted]	1,204	1,131	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR02	EBL074	2.20	Unintentional Islanding - min	2.20	Unintentional Islanding - max	[redacted]	14,159	12,021	[redacted]	3,454	3,337	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR02	EBL075	0.61	Unintentional Islanding - min	0.61	Unintentional Islanding - max	[redacted]	14,159	12,021	[redacted]	1,581	825	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR02	EBL076	0.43	Unintentional Islanding - min	0.43	Unintentional Islanding - max	[redacted]	14,159	12,021	[redacted]	609	609	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR02	EBL077	0.84	Unintentional Islanding - min	0.84	Unintentional Islanding - max	[redacted]	14,159	12,021	[redacted]	2,022	700	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR03	EBL081	1.31	Unintentional Islanding - min	1.31	Unintentional Islanding - max	[redacted]	11,227	8,820	[redacted]	1,649	1,432	Yes	LTC	No	Radial	30.28	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR03	EBL082	0.80	Primary Over-Voltage - min	1.22	Unintentional Islanding - max	[redacted]	11,227	8,820	[redacted]	1,603	1,603	Yes	LTC	No	Radial	30.28	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR03	EBL083	0.36	Unintentional Islanding - min	0.36	Unintentional Islanding - max	[redacted]	11,227	8,820	[redacted]	1,300	1,278	Yes	LTC	No	Radial	30.28	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR03	EBL084	0.03	Unintentional Islanding - min	1.31	Unintentional Islanding - max	[redacted]	11,227	8,820	[redacted]	1,803	1,513	Yes	LTC	No	Radial	30.28	0.00	30.28	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR03	EBL085	0.98	Unintentional Islanding - min	0.98	Unintentional Islanding - max	[redacted]	11,227	8,820	[redacted]	2,002	800	Yes	LTC	No	Radial	30.28	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR04	EBL086	0.58	Unintentional Islanding - min	0.58	Unintentional Islanding - max	[redacted]	NA	NA	[redacted]	NA	NA	No	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
East Blooming	EBL_TR03	EBL087	0.92	Unintentional Islanding - min	0.92	Unintentional Islanding - max	[redacted]	11,227	8,820	[redacted]	1,523	943	Yes	LTC	No	Radial	30.28	0.00	0.00	0.00	7/1/2021	Nov-21	
Elm Creek	ECK_TR01	ECK061	0.70	Reverse Power Flow - min	0.70	Reverse Power Flow - max	[redacted]	7,411	5,201	[redacted]	1,903	1,503	Yes	LTC	No	Radial	115.43	3.75	0.00	0.00	7/1/2020	Nov-20	
Elm Creek	ECK_TR01	ECK062	0.50	Primary Over-Voltage - min	1.50	Reverse Power Flow - max	[redacted]	7,411	5,201	[redacted]	1,910	1,304	Yes	LTC	No	Radial	115.43	3.75	28.27	0.00	7/1/2020	Nov-20	
Elm Creek	ECK_TR01	ECK063	0.70	Primary Over-Voltage - min	0.70	Reverse Power Flow - max	[redacted]	7,411	5,201	[redacted]	3,214	2,209	Yes	LTC	No	Radial	115.43	3.75	87.16	3.75	7/1/2020	Nov-20	
Elm Creek	ECK_TR03	ECK081	0.50	Reverse Power Flow - min	0.50	Reverse Power Flow - max	[redacted]	2,729	1,803	[redacted]	985	806	Yes	LTC	No	Radial	88.64	0.00	35.00	0.00	7/1/2020	Nov-20	
Elm Creek	ECK_TR03	ECK082	0.80	Primary Over-Voltage - min	1.00	Reverse Power Flow - max	[redacted]	2,729	1,803	[redacted]	1,304	1,005	Yes	LTC	No	Radial	88.64	0.00	53.64	0.00	7/1/2020	Nov-20	
Elm Creek	ECK_TR02	ECK321	0.00	Reverse Power Flow - min	0.00	Reverse Power Flow - max	[redacted]	11,527	9,616	[redacted]	3,490	2,675	Yes	LTC	No	Radial	670.20	40.00	94.09	0.00	7/1/2020	Nov-20	
Elm Creek	ECK_TR02	ECK322	0.20	Thermal for Gen - min	1.46	Unintentional Islanding - max	[redacted]	11,527	9,616	[redacted]	2,814	2,218	Yes	LTC	No	Radial	670.20	40.00	576.11	40.00	7/1/2021	Nov-21	
Edina	EDA_TR01	EDA061	0.60	Primary Over-Voltage - min	0.90	Reverse Power Flow - max	[redacted]	18,371	12,773	[redacted]	1,414	1,140	Yes	LTC	No	Radial	405.49	0.00	85.58	0.00	7/1/2020	Nov-20	
Edina	EDA_TR01	EDA062	1.90	Primary Over-Voltage - min	2.62	Reverse Power Flow - max	[redacted]	18,371	12,773	[redacted]	3,306	2,502	Yes	LTC	No	Radial	405.49	0.00	0.00	0.00	7/1/2020	Nov-20	
Edina	EDA_TR01	EDA065	1.50	Thermal for Gen - min	2.02	Reverse Power Flow - max	[redacted]	18,371	12,773	[redacted]	2,789	2,247	Yes	LTC	No	Radial	405.49	0.00	18.32	0.00	7/1/2020	Nov-20	
Edina	EDA_TR01	EDA066	1.30	Primary Over-Voltage - min	1.62	Reverse Power Flow - max	[redacted]	18,371	12,773	[redacted]	2,102	1,513	Yes	LTC	No	Radial	405.49	0.00	0.00	0.00	7/1/2020	Nov-20	
Edina	EDA_TR01	EDA067	0.10	Thermal for Gen - min	0.49	Breaker Relay Reduction of Reach - max	[redacted]	18,371	12,773	[redacted]	3,027	1,603	Yes	LTC	No	Radial	405.49	0.00	67.79	0.00	7/1/2020	Nov-20	
Edina	EDA_TR01	EDA068	0.90	Thermal for Gen - min	1.38	Reverse Power Flow - max	[redacted]	18,371	12,773	[redacted]	1,838	1,649	Yes	LTC	No	Radial	405.49	0.00	233.80	0.00	7/1/2020	Nov-20	
Edina	EDA_TR01	EDA069	0.83	Reverse Power Flow - min	0.83	Reverse Power Flow - max	[redacted]	18,371	12,773	[redacted]	1,140	1,140	Yes	LTC	No	Radial	405.49	0.00	0.00	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA071	0.90	Thermal for Gen - min	0.95	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	1,304	900	Yes	LTC	No	Radial	399.56	0.00	31.82	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA072	1.50	Thermal for Gen - min	1.56	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	2,377	2,134	Yes	LTC	No	Radial	399.56	0.00	5.80	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA073	0.60	Thermal for Gen - min	1.26	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	1,924	1,924	Yes	LTC	No	Radial	399.56	0.00	49.38	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA074	1.00	Thermal for Gen - min	1.30	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	1,860	1,628	Yes	LTC	No	Radial	399.56	0.00	32.11	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA075	1.10	Primary Over-Voltage - min	1.90	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	2,502	1,803	Yes	LTC	No	Radial	399.56	0.00	60.39	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA076	0.34	Reverse Power Flow - min	0.34	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	510	401	Yes	LTC	No	Radial	399.56	0.00	0.00	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA077	0.89	Reverse Power Flow - min	0.89	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	1,204	958	Yes	LTC	No	Radial	399.56	0.00	36.00	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA078	1.00	Thermal for Gen - min	1.22	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	1,551	1,514	Yes	LTC	No	Radial	399.56	0.00	166.50	0.00	7/1/2020	Nov-20	
Edina	EDA_TR02	EDA079	1.80	Primary Over-Voltage - min	1.83	Reverse Power Flow - max	[redacted]	17,944	13,720	[redacted]	2,532	1,612	Yes	LTC	No	Radial	399.56	0.00	17.56	0.00	7/1/2020	Nov-20	
Edina	EDA_TR03	EDA081	0.50	Thermal for Gen - min	1.45	Reverse Power Flow - max	[redacted]	12,101	12,101	[redacted]	2,002	2,002	Yes	LTC	No	Radial	620.71	0.00	19.01	0.00	7/1/2020	Nov-20	
Edina	EDA_TR03	EDA082	1.10	Thermal for Gen - min	1.28	Reverse Power Flow - max	[redacted]	12,101	12,101	[redacted]	1,712	1,712	Yes	LTC	No	Radial	620.71	0.00	0.00	0.00	7/1/2020	Nov-20	
Edina	EDA_TR03	EDA083	1.04	Reverse Power Flow - min	1.04	Reverse Power Flow - max	[redacted]	12,101	12,101	[redacted]	1,360	1,360	Yes	LTC	No	Radial	620.71	0.00	0.00	0.00	7/1/2020	Nov-20	
Edina	EDA_TR03	EDA084	1.00	Thermal for Gen - min	1.38	Reverse Power Flow - max	[redacted]	12,101	12,101	[redacted]	1,775	1,503	Yes	LTC	No	Radial	620.71	0.00	51.65	0.00	7/1/2020	Nov-20	
Edina	EDA_TR03	EDA085	0.39	Reverse Power Flow - min	0.39	Reverse Power Flow - max	[redacted]	12,101	12,101	[redacted]	510	447	Yes	LTC	Yes	Radial	620.71	0.00	527.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Edina	EDA_TR03	EDA087	0.90	Thermal for Gen - min	1.23	Reverse Power Flow - max	[redacted]	12,101	12,101	[redacted]	1,726	1,726	Yes	LTC	No	Radial	620.71	0.00	9.00	0.00	7/1/2020	Nov-20	
Edina	EDA_TR03	EDA088	0.92	Reverse Power Flow - min	0.92	Reverse Power Flow - max	[redacted]	12,101	12,101	[redacted]	1,304	1,118	Yes	LTC	No	Radial	620.71	0.00	0.00	0.00	7/1/2020	Nov-20	

PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Edina	EDA_TR03	EDA089	0.60	Primary Over-Voltage - min	1.28	Reverse Power Flow - max		12,101	12,101		1,745	1,456	Yes	LTC	No	Radial	620.71	0.00	14.05	0.00	7/1/2020	Nov-20	
Eden Prarie	EDP_TR01	EDP062	1.20	Primary Over-Voltage - min	1.23	Unintentional Islanding - max		10,604	8,001		2,790	2,400	Yes	LTC	No	Radial	82.69	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR01	EDP063	1.04	Unintentional Islanding - min	1.04	Unintentional Islanding - max		10,604	8,001		1,400	1,400	Yes	LTC	No	Radial	82.69	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR01	EDP071	0.28	Unintentional Islanding - min	0.28	Unintentional Islanding - max		10,604	8,001		1,000	900	Yes	LTC	No	Radial	82.69	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR01	EDP072	0.29	Unintentional Islanding - min	0.29	Unintentional Islanding - max		10,604	8,001		920	810	Yes	LTC	No	Radial	82.69	0.00	20.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR01	EDP073	0.80	Unintentional Islanding - min	0.80	Unintentional Islanding - max		10,604	8,001		2,750	2,200	Yes	LTC	No	Radial	82.69	0.00	62.69	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR03	EDP081	0.11	Unintentional Islanding - min	0.11	Unintentional Islanding - max		6,591	5,842		167	167	Yes	LTC	No	Radial	142.23	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR03	EDP082	0.35	Unintentional Islanding - min	0.35	Unintentional Islanding - max		6,591	5,842		1,517	1,414	Yes	LTC	No	Radial	142.23	0.00	142.23	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR03	EDP083	1.07	Unintentional Islanding - min	1.07	Unintentional Islanding - max		6,591	5,842		1,992	1,897	Yes	LTC	No	Radial	142.23	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR03	EDP084	0.14	Unintentional Islanding - min	0.14	Unintentional Islanding - max		6,591	5,842		590	446	Yes	LTC	No	Radial	142.23	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR03	EDP085	0.66	Unintentional Islanding - min	0.66	Unintentional Islanding - max		6,591	5,842		1,803	1,360	Yes	LTC	No	Radial	142.23	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR04	EDP091	0.77	Unintentional Islanding - min	0.77	Unintentional Islanding - max		10,604	7,803		1,100	800	Yes	LTC	No	Radial	373.23	0.00	6.63	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR04	EDP092	0.87	Unintentional Islanding - min	0.87	Unintentional Islanding - max		10,604	7,803		1,749	1,664	Yes	LTC	No	Radial	373.23	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR04	EDP093	1.50	Thermal for Gen - min	1.60	Unintentional Islanding - max		10,604	7,803		2,247	1,432	Yes	LTC	No	Radial	373.23	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR04	EDP094	0.47	Unintentional Islanding - min	0.47	Unintentional Islanding - max		10,604	7,803		1,503	1,433	Yes	LTC	No	Radial	373.23	0.00	0.00	0.00	7/1/2021	Nov-21	
Eden Prarie	EDP_TR04	EDP095	1.18	Unintentional Islanding - min	1.18	Unintentional Islanding - max		10,604	7,803		1,503	1,400	Yes	LTC	No	Radial	373.23	0.00	366.60	0.00	7/1/2021	Nov-21	
Eagle Lake	EGL_TR01	EGL021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,122	1,122		641	641	No	Regulator	Yes	Radial	6,245.51	0.00	6,245.51	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Eagle Lake	EGL_TR01	EGL022	0.30	Thermal for Gen - min	0.52	Reverse Power Flow - max		1,122	1,122		671	671	No	Regulator	No	Radial	6,245.51	0.00	0.00	0.00	7/1/2020	Nov-20	
Elko	EKO_TR01	EKO021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		0	0		1,039	816	Yes	Regulator	No	Radial	863.00	0.00	863.00	0.00	7/1/2020	Nov-20	Substation owned by Foreign Utility. Contractual obligations may reduce capacity and increase interconnection timelines
Elliott Park	ELP_TR01	ELP061	1.50	Thermal for Gen - min	2.08	Reverse Power Flow - max		14,560	12,032		2,742	2,220	Yes	LTC	No	Radial	20.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR01	ELP062	0.50	Thermal for Gen - min	2.49	Reverse Power Flow - max		14,560	12,032		3,725	3,327	Yes	LTC	No	Radial	20.00	0.00	20.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR01	ELP063	0.90	Thermal for Gen - min	2.23	Reverse Power Flow - max		14,560	12,032		2,984	2,539	Yes	LTC	No	Radial	20.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR02	ELP071	0.97	Reverse Power Flow - min	0.97	Reverse Power Flow - max		14,285	11,701		1,943	1,498	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR02	ELP072	1.00	Reverse Power Flow - min	1.00	Reverse Power Flow - max		14,285	11,701		1,372	1,297	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR02	ELP073	0.00	Reverse Power Flow - min	0.00	Reverse Power Flow - max		14,285	11,701		660	660	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR02	ELP074	1.25	Reverse Power Flow - min	1.25	Reverse Power Flow - max		14,285	11,701		1,649	1,523	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR02	ELP075	0.90	Thermal for Gen - min	1.34	Reverse Power Flow - max		14,285	11,701		741	725	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR03	ELP081	1.20	Thermal for Gen - min	2.25	Reverse Power Flow - max		15,474	13,055		2,851	1,937	Yes	LTC	No	Radial	20.44	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR03	ELP082	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		15,474	13,055		3,503	3,183	Yes	LTC	No	Radial	20.44	0.00	10.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR03	ELP083	0.92	Reverse Power Flow - min	0.92	Reverse Power Flow - max		15,474	13,055		659	622	Yes	LTC	No	Radial	20.44	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR03	ELP084	0.90	Thermal for Gen - min	3.56	Reverse Power Flow - max		15,474	13,055		4,915	4,738	Yes	LTC	No	Radial	20.44	0.00	10.44	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR03	ELP085	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		15,474	13,055		NA	NA	No	LTC	No	Radial	20.44	0.00	0.00	0.00	7/1/2020	Nov-20	
Elliott Park	ELP_TR03	ELP086	1.80	Primary Over-Voltage - min	1.86	Reverse Power Flow - max		15,474	13,055		5,013	3,804	Yes	LTC	No	Radial	20.44	0.00	0.00	0.00	7/1/2020	Nov-20	
Essig	ESG_TR01	ESG001	0.10	Primary Over-Voltage - min	0.56	Breaker Relay Reduction of Reach - max		54	54		63	63	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Eastwood	ESW_TR01	ESW061	0.30	Thermal for Gen - min	2.29	Reverse Power Flow - max		8,579	7,248		3,239	2,880	Yes	LTC	No	Radial	15.42	0.00	0.00	0.00	7/1/2020	Nov-20	
Eastwood	ESW_TR01	ESW062	0.40	Thermal for Gen - min	3.06	Reverse Power Flow - max		8,579	7,248		4,219	3,543	Yes	LTC	No	Radial	15.42	0.00	15.42	0.00	7/1/2020	Nov-20	
Eastwood	ESW_TR01	ESW063	0.54	Reverse Power Flow - min	0.54	Reverse Power Flow - max		8,579	7,248		1,036	990	Yes	LTC	No	Radial	15.42	0.00	0.00	0.00	7/1/2020	Nov-20	
Eastwood	ESW_TR02	ESW071	0.90	Thermal for Gen - min	1.06	Reverse Power Flow - max		3,907	3,907		1,646	1,198	Yes	LTC	No	Radial	5,500.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Eastwood	ESW_TR02	ESW072	0.90	Thermal for Gen - min	1.40	Reverse Power Flow - max		3,907	3,907		1,825	1,825	Yes	LTC	No	Radial	5,500.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Eastwood	ESW_TR02	ESW073	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		3,907	3,907		804	783	Yes	LTC	Yes	Radial	5,500.00	0.00	5,500.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Eastwood	ESW_TR03	ESW081	0.90	Thermal for Gen - min	1.14	Reverse Power Flow - max		5,109	3,700		1,500	1,100	Yes	LTC	No	Radial	107.28	0.00	33.08	0.00	7/1/2020	Nov-20	
Eastwood	ESW_TR03	ESW082	1.10	Thermal for Gen - min	2.30	Reverse Power Flow - max		5,109	3,700		2,927	2,402	Yes	LTC	No	Radial	107.28	0.00	74.20	0.00	7/1/2020	Nov-20	
East Winona	EWI_TR01	EWI022	0.40	Thermal for Gen - min	1.83	Unintentional Islanding - max		1,879	1,879		1,819	1,819	No	LTC	No	Radial	5.00	0.00	5.00	0.00	1/1/2021	Aug-21	
Excelsior	EXC_TR01	EXC061	0.90	Thermal for Gen - min	0.91	Unintentional Islanding - max		2,555	2,555		1,188	1,188	No	Regulator	No	Radial	75.48	7.63	43.89	7.63	1/1/2021	Aug-21	
Excelsior	EXC_TR01	EXC062	0.90	Thermal for Gen - min	1.01	Unintentional Islanding - max		2,555	2,555		1,352	1,352	No	Regulator	No	Radial	75.48	7.63	31.59	0.00	1/1/2021	Aug-21	
Faribault	FAB_TR02	FAB061	0.50	Thermal for Gen - min	1.26	Reverse Power Flow - max		4,800	3,601		1,879	1,565	Yes	LTC	No	Radial	3,015.68	2,005.00	2.61	5.00	7/1/2020	Nov-20	
Faribault	FAB_TR02	FAB063	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		4,800	3,601		2,864	2,088	Yes	LTC	Yes	Radial	3,015.68	2,005.00	3,013.07	2,000.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Faribault	FAB_TR01	FAB071	0.20	Thermal for Gen - min	1.50	Reverse Power Flow - max		3,646	2,915		2,062	1,726	Yes	Regulator	No	Radial	20.09	0.24	2.40	0.24	7/1/2020	Nov-20	
Faribault	FAB_TR01	FAB073	0.30	Thermal for Gen - min	1.14	Reverse Power Flow - max		3,646	2,915		1,584	1,300	Yes	Regulator	No	Radial	20.09	0.24	17.69	0.00	7/1/2020	Nov-20	
Fair Park	FAP_TR01	FAP061	0.00	Thermal for Gen - min	0.00	Breaker Relay Reduction of Reach - max		2,663	2,316		2,663	2,316	Yes	LTC	Yes	Radial	5,543.49	0.00	5,543.49	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Fair Park	FAP_TR01	FAP062	0.30	Thermal for Gen - min	1.18	Reverse Power Flow - max		2,663	2,316		NA	NA	No	LTC	No	Radial	5,543.49	0.00	0.00	0.00	7/1/2020	Nov-20	
Fair Park	FAP_TR02	FAP071	0.30	Thermal for Gen - min	2.10	Reverse Power Flow - max		2,843	2,558		2,843	2,558	Yes	Regulator	No	Radial	33.14	0.00	33.14	0.00	7/1/2020	Nov-20	
Fiesta City	FIC_TR01	FIC021	0.10	Primary Over-Voltage - min	1.14	Breaker Relay Reduction of Reach - max		1,837	1,515		1,258	1,145	Yes	LTC	Yes	Radial	4,110.60	0.00	4,110.60	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Fiesta City	FIC_TR01	FIC022	0.60	Thermal for Gen - min	0.92	Reverse Power Flow - max		1,837	1,515		1,300	1,300	Yes	LTC	No	Radial	4,110.60	0.00	0.00	0.00	7/1/2020	Nov-20	
Fiesta City	FIC_TR02	FIC031	0.10	Primary Over-Voltage - min	0.86	Reverse Power Flow - max		1,100	1,100		1,100	1,100	Yes	LTC	No	Radial	11.38	0.00	11.38	0.00	7/1/2020	Nov-20	
Franklin	FRA_TR07	FRA001	0.05	Unintentional Islanding - min	0.05	Unintentional Islanding - max		240	240		240	240	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Franklin	FRA_TR04	FRA211	0.60	Thermal for Gen - min	0.81	Unintentional Islanding - max		327	327		327	327	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Farmington	FRM_TR01	FRM061	0.61	Unintentional Islanding - min	0.61	Unintentional Islanding - max		1,084	855		640	640	Yes	LTC	No	Radial	10,801.55	0.00	740.40	0.00	1/1/2021	Aug-21	
Farmington	FRM_TR01	FRM062	0.37	Thermal for Gen - min	0.37	Breaker Relay Reduction of Reach - max		1,084	855		447	214	Yes	LTC	Yes	Radial	10,801.55	0.00	10,061.15	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Farmington	FRM_TR02	FRM071	0.00	Thermal for Gen - min	1.28	Breaker Relay Reduction of Reach - max		1,360	1,360		1,360	1,360	Yes	LTC	Yes	Radial	6,157.48	3.36	6,157.48	3.36	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Frontenac	FRO_TR01	FRO021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		563	563		563	563	No	Regulator	Yes	Radial	5,029.99	0.00	5,029.99	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
First Lake	FSL_TR01	FSL311	0.00	Breaker Relay Reduction of Reach - min	2.49	Primary Over-Voltage - max		13,320	11,389		6,003	4,601	Yes	LTC	Yes	Radial	11,262.13	2,000.00	11,024.09	2,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
First Lake	FSL_TR01	FSL312	0.20	Primary Over-Voltage - min	0.80	Breaker Relay Reduction of Reach - max		13,320	11,389		7,747	6,531	Yes	LTC	No	Radial	11,262.13	2,000.00	238.03	0.00	1/1/2021	Aug-21	
Fifth Street	FST_TR01	FST067	0.54	Reverse Power Flow - min	0.54	Reverse Power Flow - max		11,171	9,805		720	665	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Fifth Street	FST_TR01	FST068	0.93	Reverse Power Flow - min	0.93	Reverse Power Flow - max		11,171	9,805		1,228	1,031	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Fifth Street	FST_TR02	FST077	0.40	Reverse Power Flow - min	0.40	Reverse Power Flow - max		11,626	10,102		525	478	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Fifth Street	FST_TR02	FST078	1.34	Reverse Power Flow - min	1.34	Reverse Power Flow - max		11,626	10,102		1,726	1,334	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Fifth Street	FST_TR03	FST085	0.34	Reverse Power Flow - min	0.34	Reverse Power Flow - max		11,910	10,218		445	421	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Fifth Street	FST_TR03	FST086	0.58	Reverse Power Flow - min	0.58	Reverse Power Flow - max		11,910	10,218		768	712	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Fifth Street	FST_TR04	FST087	0.37	Reverse Power Flow - min	0.37	Reverse Power Flow - max		11,526	10,070		561	536	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Fifth Street	FST_TR04	FST088	0.22	Reverse Power Flow - min	0.22	Reverse Power Flow - max		11,526	10,070		333	333	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Gaylord	GAY_TR01	GAY001	0.10	Primary Over-Voltage - min	0.18	Reverse Power Flow - max		749	749		244	244	No	Regulator	No	Radial	1,014.55	3,960.00	0.00	0.00	7/1/2020	Nov-20	
Gaylord	GAY_TR01	GAY002	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		749	749		487	487	No	Regulator	Yes	Radial	1,014.55	3,960.00	1,014.55	3,960.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Gaylord	GAY_TR01	GAY003	0.20	Primary Over-Voltage - min	0.21	Reverse Power Flow - max		749	749		298	298	No	Regulator	No	Radial	1,014.55	3,960.00	0.00	0.00	7/1/2020	Nov-20	
Greenfield	GFD_TR01	GFD021	0.40	Primary Over-Voltage - min	0.61	Reverse Power Flow - max		1,280	1,280		772	772	Yes	Regulator	Yes	Radial	10,000.00	6.24	10,000.00	6.24	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Greenfield	GFD_TR01	GFD022	0.30	Thermal for Gen - min	0.50	Reverse Power Flow - max		1,280	1,280		604	604	Yes	Regulator	No	Radial	10,000.00	6.24	0.00	0.00	7/1/2020	Nov-20	
Gibbon	GIB_TR01	GIB021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		439	439		439	439	No	Regulator	Yes	Radial	3,256.00	0.00	3,256.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Glenwood	GLD_TR01	GLD021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		3,045	2,354		3,045	2,354	Yes	Regulator	Yes	Radial	11,048.53	4,000.00	11,048.53	4,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Glenwood	GLD_TR02	GLD031	0.10	Primary Over-Voltage - min	0.90	Primary Over-Voltage - max		1,204	900		1,204	900	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR01	GLK061	0.05	Unintentional Islanding - min	2.63	Unintentional Islanding - max		11,624	9,173		2,830	2,729	Yes	LTC	No	Radial	193.84	0.00	50.29	0.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR01	GLK062	0.28	Unintentional Islanding - min	2.84	Unintentional Islanding - max		11,624	9,173		2,968	2,743	Yes	LTC	No	Radial	193.84	0.00	45.32	0.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR01	GLK063	0.10	Unintentional Islanding - min	1.58	Unintentional Islanding - max		11,624	9,173		1,868	1,628	Yes	LTC	No	Radial	193.84	0.00	26.01	0.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR01	GLK064	0.09	Unintentional Islanding - min	1.81	Unintentional Islanding - max		11,624	9,173		2,040	1,552	Yes	LTC	No	Radial	193.84	0.00	65.28	0.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR01	GLK065	0.09	Unintentional Islanding - min	1.03	Unintentional Islanding - max		11,624	9,173		1,237	1,020	Yes	LTC	No	Radial	193.84	0.00	6.94	0.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR02	GLK071	0.45	Unintentional Islanding - min	2.65	Unintentional Islanding - max		10,307	9,872		2,751	2,751	Yes	LTC	No	Radial	205.43	206.38	72.88	0.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR02	GLK072	0.90	Thermal for Gen - min	3.01	Unintentional Islanding - max		10,307	9,872		3,239	2,717	Yes	LTC	No	Radial	205.43	206.38	30.14	0.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR02	GLK073	0.50	Thermal for Gen - min	1.92	Unintentional Islanding - max		10,307	9,872		2,062	1,844	Yes	LTC	No	Radial	205.43	206.38	64.81	200.00	1/1/2021	Aug-21	
Goose Lake	GLK_TR02	GLK074	0.30	Primary Over-Voltage - min	2.27	Unintentional Islanding - max		10,307	9,872		2,410	1,810	Yes	LTC	No	Radial	205.43	206.38	37.60	6.38	1/1/2021	Aug-21	
Glen Lake	GNL_TR01	GNL061	0.77	Unintentional Islanding - min	0.77	Unintentional Islanding - max		5,314	3,433		1,086	895	Yes	Regulator	No	Radial	38.19	286.60	0.00	0.00	1/1/2021	Aug-21	
Glen Lake	GNL_TR01	GNL062	0.90	Thermal for Gen - min	1.26	Unintentional Islanding - max		5,314	3,433		1,861	1,450	Yes	Regulator	No	Radial	38.19	286.60	22.30	286.60	1/1/2021	Aug-21	
Glen Lake	GNL_TR01	GNL063	0.90	Thermal for Gen - min	1.01	Unintentional Islanding - max		5,314	3,433		1,642	1,502	Yes	Regulator	No	Radial	38.19	286.60	15.89	0.00	1/1/2021	Aug-21	
Glen Lake	GNL_TR02	GNL071	0.50	Thermal for Gen - min	1.18	Unintentional Islanding - max		4,916	4,559		1,728	1,057	Yes	Regulator	No	Radial	271.63	0.00	59.17	0.00	1/1/2021	Aug-21	
Glen Lake	GNL_TR02	GNL072	0.90	Thermal for Gen - min	1.66	Unintentional Islanding - max		4,916	4,559		2,536	1,849	Yes	Regulator	No	Radial	271.63	0.00	162.39	0.00	1/1/2021	Aug-21	
Glen Lake	GNL_TR02	GNL073	0.98	Unintentional Islanding - min	0.98	Unintentional Islanding - max		4,916	4,559		1,637	1,492	Yes	Regulator	No	Radial	271.63	0.00	50.07	0.00	1/1/2021	Aug-21	
Gopher	GPH_TR01	GPH061	0.90	Thermal for Gen - min	1.20	Unintentional Islanding - max		6,946	6,184		2,207	1,984	Yes	LTC	No	Radial	42.27	0.00	14.46	0.00	7/1/2021	Nov-21	
Gopher	GPH_TR01	GPH062	0.90	Thermal for Gen - min	1.59	Unintentional Islanding - max		6,946	6,184		4,380	3,859	Yes	LTC	No	Radial	42.27	0.00	27.81	0.00	7/1/2021	Nov-21	
Gopher	GPH_TR01	GPH068	1.66	Unintentional Islanding - min	1.66	Unintentional Islanding - max		6,946	6,184		4,454	4,087	Yes	LTC	No	Radial	42.27	0.00	0.00	0.00	7/1/2021	Nov-21	
Gopher	GPH_TR01	GPH069	0.95	Unintentional Islanding - min	0.95	Unintentional Islanding - max		6,946	6,184		1,034	897	Yes	LTC	No	Radial	42.27	0.00	0.00	0.00	7/1/2021	Nov-21	
Gopher	GPH_TR02	GPH073	0.77	Unintentional Islanding - min	0.77	Unintentional Islanding - max		3,333	2,678		1,355	1,206	Yes	LTC	No	Radial	36.00	0.00	36.00	0.00	7/1/2021	Nov-21	
Gopher	GPH_TR02	GPH074	0.70	Unintentional Islanding - min	0.70	Unintentional Islanding - max		3,333	2,678		1,094	1,094	No	LTC	No	Radial	36.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Gopher	GPH_TR02	GPH075	1.40	Unintentional Islanding - min	1.40	Unintentional Islanding - max		3,333	2,678		1,263	1,263	No	LTC	No	Radial	36.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Gopher	GPH_TR02	GPH079	0.76	Unintentional Islanding - min	0.76	Unintentional Islanding - max		3,333	2,678		711	711	No	LTC	No	Radial	36.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Granite City	GRC_TR01	GRC062	0.90	Thermal for Gen - min	2.18	Reverse Power Flow - max		5,783	4,998		2,816	2,247	Yes	Regulator	No	Radial	4,727.66	0.00	527.84	0.00	7/1/2020	Nov-20	
Granite City	GRC_TR01	GRC063	0.80	Thermal for Gen - min	2.08	Reverse Power Flow - max		5,783	4,998		2,746	2,159	Yes	Regulator	No	Radial	4,727.66	0.00	4,199.82	0.00	7/1/2020	Nov-20	
Granite City	GRC_TR02	GRC073	0.20	Primary Over-Voltage - min	1.10	Breaker Relay Reduction of Reach - max		2,596	2,214		2,596	2,214	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Granite City	GRC_TR03	GRC311	0.00	Additional Element Fault Current - min	0.00	Breaker Relay Reduction of Reach - max		6,526	6,526		2,886	2,685	Yes	LTC	Yes	Radial	9,784.50	0.00	5,708.31	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Granite City	GRC_TR03	GRC312	0.00	Additional Element Fault Current - min	0.00	Breaker Relay Reduction of Reach - max		6,526	6,526		6,361	5,263	Yes	LTC	Yes	Radial	9,784.50	0.00	4,029.62	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Granite City	GRC_TR03	GRC313	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		6,526	6,526		1,304	1,005	Yes	LTC	No	Radial	9,784.50	0.00	46.58	0.00	7/1/2020	Nov-20	
Green Isle	GRI_TR01	GRI001	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		228	228		222	222	No	LTC	No	Radial	1,000.00	29.99	1,000.00	29.99	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Gleason Lake	GSL_TR07	GSL061	0.17	Unintentional Islanding - min	0.17	Unintentional Islanding - max		5,148	4,100		1,020	707	Yes	LTC	No	Radial	31.63	8.40	9.99	8.40	7/1/2021	Nov-21	
Gleason Lake	GSL_TR07	GSL064	0.50	Thermal for Gen - min	0.59	Unintentional Islanding - max		5,148	4,100		2,110	1,603	Yes	LTC	No	Radial	31.63	8.40	0.00	0.00	7/1/2021	Nov-21	
Gleason Lake	GSL_TR07	GSL065	0.33	Unintentional Islanding - min	0.33	Unintentional Islanding - max		5,148	4,100		1,924	1,612	Yes	LTC	No	Radial	31.63	8.40	21.64	0.00	7/1/2021	Nov-21	
Gleason Lake	GSL_TR08	GSL074	0.10	Unintentional Islanding - min	0.66	Unintentional Islanding - max		5,743	5,743		2,193	1,924	Yes	LTC	No	Radial	113.50	452.50	62.57	15.00	7/1/2021	Nov-21	
Gleason Lake	GSL_TR08	GSL075	0.90	Thermal for Gen - min	0.92	Unintentional Islanding - max		5,743	5,743		2,511	1,942	Yes	LTC	No	Radial	113.50	452.50	15.84	0.00	7/1/2021	Nov-21	
Gleason Lake	GSL_TR08	GSL076	0.38	Unintentional Islanding - min	0.38	Unintentional Islanding - max		5,743	5,743		1,803	1,414	Yes	LTC	No	Radial	113.50	452.50	29.87	437.50	7/1/2021	Nov-21	
Gleason Lake	GSL_TR08	GSL079	0.26	Unintentional Islanding - min	0.26	Unintentional Islanding - max		5,743	5,743		1,334	1,204	Yes	LTC	No	Radial	113.50	452.50	5.22	0.00	7/1/2021	Nov-21	
Gleason Lake	GSL_TR04	GSL341	0.20	Primary Over-Voltage - min	2.52	Unintentional Islanding - max		12,170	7,734		6,414	4,699	Yes	LTC	No	Radial	307.32	0.00	217.43	0.00	7/1/2021	Nov-21	
Gleason Lake	GSL_TR04	GSL342	0.43	Unintentional Islanding - min	0.43	Unintentional Islanding - max		12,170	7,734		7,607	5,146	Yes	LTC	No	Radial	307.32	0.00	89.89	0.00	7/1/2021	Nov-21	
Goodview	GVW_TR01	GVW021	0.10	Thermal for Gen - min	1.25	Reverse Power Flow - max		6,589	4,989		1,596	1,596	No	LTC	No	Radial	102.39	0.00	55.91	0.00	7/1/2020	Nov-20	
Goodview	GVW_TR01	GVW022	0.20	Thermal for Gen - min	1.51	Reverse Power Flow - max		6,589	4,989		1,924	1,924	No	LTC	No	Radial	102.39	0.00	33.30	0.00	7/1/2020	Nov-20	
Goodview	GVW_TR01	GVW023	0.20	Thermal for Gen - min	1.42	Reverse Power Flow - max		6,589	4,989		1,835	1,835	No	LTC	No	Radial	102.39	0.00	13.18	0.00	7/1/2020	Nov-20	
Goodview	GVW_TR02	GVW031	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		5,382	4,960		1,757	1,757	No	LTC	Yes	Radial	5,310.71	0.00	5,300.58	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Goodview	GVW_TR02	GVW032	0.10	Thermal for Gen - min	1.50	Breaker Relay Reduction of Reach - max		5,382	4,960		1,970	1,970	No	LTC	No	Radial	5,310.71	0.00	10.13	0.00	7/1/2020	Nov-20	
Hadley	HAD_TR01	HAD021	0.05	Reverse Power Flow - min	0.05	Reverse Power Flow - max		397	-		78	-	Yes	Regulator	No	Radial	1,003.36	0.00	3.36	0.00	7/1/2020	Nov-20	

PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Hadley	HAD_TR01	HAD022	0.00	Breaker Relay Reduction of Reach - min	0.00	Breaker Relay Reduction of Reach - max		397	-		320	-	Yes	Regulator	Yes	Radial	1,003.36	0.00	1,000.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Hastings	HAS_TR01	HAS021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		5,354	4,186		1,527	1,278	Yes	LTC	Yes	Radial	4,603.19	0.00	4,594.55	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Hastings	HAS_TR01	HAS022	0.30	Thermal for Gen - min	1.49	Unintentional Islanding - max		5,354	4,186		2,309	1,903	Yes	LTC	No	Radial	4,603.19	0.00	8.64	0.00	1/1/2021	Aug-21	
Hastings	HAS_TR01	HAS023	0.73	Unintentional Islanding - min	0.73	Unintentional Islanding - max		5,354	4,186		1,000	1,000	Yes	LTC	No	Radial	4,603.19	0.00	0.00	0.00	1/1/2021	Aug-21	
Hastings	HAS_TR02	HAS031	0.69	Unintentional Islanding - min	0.69	Unintentional Islanding - max		2,667	2,444		1,204	1,204	Yes	LTC	No	Radial	6.72	0.00	0.00	0.00	1/1/2021	Aug-21	
Hastings	HAS_TR02	HAS032	0.03	Unintentional Islanding - min	0.52	Unintentional Islanding - max		2,667	2,444		762	632	Yes	LTC	No	Radial	6.72	0.00	6.72	0.00	1/1/2021	Aug-21	
Hastings	HAS_TR02	HAS033	0.48	Unintentional Islanding - min	0.48	Unintentional Islanding - max		2,667	2,444		701	608	Yes	LTC	No	Radial	6.72	0.00	0.00	0.00	1/1/2021	Aug-21	
Hector	HEC_TR01	HEC001	0.00	Primary Over-Voltage - min	0.46	Breaker Relay Reduction of Reach - max		584	584		584	584	No	Regulator	Yes	Radial	3,003.48	0.00	3,003.48	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Henderson	HEN_TR01	HEN021	0.20	Thermal for Gen - min	0.34	Unintentional Islanding - max		342	342		365	365	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Hollydale	HOL_TR02	HOL061	1.12	Unintentional Islanding - min	1.12	Unintentional Islanding - max		4,597	3,264		2,010	1,575	Yes	LTC	No	Radial	89.43	0.00	42.30	0.00	7/1/2021	Nov-21	
Hollydale	HOL_TR02	HOL062	0.90	Thermal for Gen - min	1.47	Unintentional Islanding - max		4,597	3,264		2,561	1,471	Yes	LTC	No	Radial	89.43	0.00	47.13	0.00	7/1/2021	Nov-21	
Howard Lake	HOW_TR01	HOW061	0.00	Unintentional Islanding - min	1.02	Unintentional Islanding - max		1,482	1,482		1,482	1,482	No	Regulator	No	Radial	129.90	0.00	129.90	0.00	1/1/2021	Aug-21	
Hassan	HSN_TR01	HSN311	0.50	Thermal for Gen - min	3.39	Breaker Relay Reduction of Reach - max		11,841	10,712		5,219	4,444	Yes	LTC	No	Radial	3,065.42	0.00	3,049.01	0.00	7/1/2020	Nov-20	
Hassan	HSN_TR01	HSN312	0.00	Unintentional Islanding - min	5.14	Unintentional Islanding - max		11,841	10,712		6,775	6,567	Yes	LTC	No	Radial	3,065.42	0.00	16.41	0.00	7/1/2021	Nov-21	
Hassan	HSN_TR02	HSN321	0.00	Additional Element Fault Current - min	0.00	Breaker Relay Reduction of Reach - max		16,669	14,208		5,827	5,378	Yes	LTC	No	Radial	5,128.34	0.00	5,113.10	0.00	7/1/2020	Nov-20	
Hassan	HSN_TR02	HSN322	1.40	Thermal for Gen - min	6.06	Reverse Power Flow - max		16,669	14,208		8,222	7,153	Yes	LTC	No	Radial	5,128.34	0.00	15.24	0.00	7/1/2020	Nov-20	
Hugo	HUG_TR01	HUG311	0.20	Thermal for Gen - min	0.47	Breaker Relay Reduction of Reach - max		8,269	7,240		7,030	4,649	Yes	LTC	No	Radial	323.27	14.50	147.88	0.00	7/1/2020	Nov-20	
Hugo	HUG_TR01	HUG312	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		8,269	7,240		5,991	4,364	Yes	LTC	No	Radial	323.27	14.50	175.39	14.50	7/1/2020	Nov-20	
Hugo	HUG_TR02	HUG321	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		11,258	10,294		5,921	5,443	Yes	LTC	Yes	Radial	11,747.68	10,030.81	11,678.03	10,023.48	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Hugo	HUG_TR02	HUG322	2.40	Thermal for Gen - min	2.42	Reverse Power Flow - max		11,258	10,294		4,812	4,812	Yes	LTC	No	Radial	11,747.68	10,030.81	69.65	7.33	7/1/2020	Nov-20	
Hiawatha Wes	HWW_TR01	HWW061	0.20	Thermal for Gen - min	0.58	Reverse Power Flow - max		18,116	15,165		914	658	Yes	LTC	No	Radial	851.61	37.80	54.07	0.00	7/1/2020	Nov-20	
Hiawatha Wes	HWW_TR01	HWW062	0.90	Thermal for Gen - min	1.54	Reverse Power Flow - max		18,116	15,165		2,184	1,530	Yes	LTC	No	Radial	851.61	37.80	126.15	0.00	7/1/2020	Nov-20	
Hiawatha Wes	HWW_TR01	HWW071	0.90	Thermal for Gen - min	2.66	Reverse Power Flow - max		18,116	15,165		3,520	2,822	Yes	LTC	No	Radial	851.61	37.80	8.09	0.00	7/1/2020	Nov-20	
Hiawatha Wes	HWW_TR01	HWW072	0.90	Thermal for Gen - min	1.58	Reverse Power Flow - max		18,116	15,165		2,087	1,561	Yes	LTC	No	Radial	851.61	37.80	56.10	37.80	7/1/2020	Nov-20	
Hiawatha Wes	HWW_TR01	HWW073	0.50	Thermal for Gen - min	1.14	Reverse Power Flow - max		18,116	15,165		1,684	1,339	Yes	LTC	No	Radial	851.61	37.80	156.04	0.00	7/1/2020	Nov-20	
Hiawatha Wes	HWW_TR01	HWW074	0.90	Thermal for Gen - min	1.61	Reverse Power Flow - max		18,116	15,165		2,165	1,799	Yes	LTC	No	Radial	851.61	37.80	178.16	0.00	7/1/2020	Nov-20	
Hiawatha Wes	HWW_TR01	HWW075	0.90	Thermal for Gen - min	2.38	Reverse Power Flow - max		18,116	15,165		3,040	2,848	Yes	LTC	No	Radial	851.61	37.80	273.00	0.00	7/1/2020	Nov-20	
Hyland Lake	HYL_TR01	HYL061	1.00	Primary Over-Voltage - min	1.15	Reverse Power Flow - max		15,804	12,630		1,529	1,300	Yes	LTC	No	Radial	828.47	7.62	256.61	7.62	7/1/2020	Nov-20	
Hyland Lake	HYL_TR01	HYL062	1.00	Thermal for Gen - min	1.60	Reverse Power Flow - max		15,804	12,630		2,121	1,676	Yes	LTC	No	Radial	828.47	7.62	37.54	0.00	7/1/2020	Nov-20	
Hyland Lake	HYL_TR01	HYL063	0.60	Primary Over-Voltage - min	0.92	Reverse Power Flow - max		15,804	12,630		1,304	1,304	Yes	LTC	No	Radial	828.47	7.62	351.62	0.00	7/1/2020	Nov-20	
Hyland Lake	HYL_TR01	HYL064	0.50	Primary Over-Voltage - min	1.18	Reverse Power Flow - max		15,804	12,630		1,628	1,628	Yes	LTC	No	Radial	828.47	7.62	62.70	0.00	7/1/2020	Nov-20	
Hyland Lake	HYL_TR01	HYL065	1.50	Thermal for Gen - min	3.54	Reverse Power Flow - max		15,804	12,630		4,604	4,516	Yes	LTC	No	Radial	828.47	7.62	120.00	0.00	7/1/2020	Nov-20	
Hyland Lake	HYL_TR02	HYL071	0.07	Reverse Power Flow - min	0.07	Reverse Power Flow - max		6,356	6,185		200	130	Yes	LTC	No	Radial	164.35	7.92	4.80	0.00	7/1/2020	Nov-20	
Hyland Lake	HYL_TR02	HYL072	0.80	Primary Over-Voltage - min	1.10	Reverse Power Flow - max		6,356	6,185		1,616	1,304	Yes	LTC	No	Radial	164.35	7.92	0.00	0.00	7/1/2020	Nov-20	
Hyland Lake	HYL_TR02	HYL073	0.90	Thermal for Gen - min	1.41	Reverse Power Flow - max		6,356	6,185		1,838	1,803	Yes	LTC	No	Radial	164.35	7.92	65.58	0.00	7/1/2020	Nov-20	
Hyland Lake	HYL_TR02	HYL074	0.60	Thermal for Gen - min	1.42	Reverse Power Flow - max		6,356	6,185		1,910	1,899	Yes	LTC	No	Radial	164.35	7.92	56.59	7.92	7/1/2020	Nov-20	
Hyland Lake	HYL_TR02	HYL075	0.80	Primary Over-Voltage - min	1.02	Reverse Power Flow - max		6,356	6,185		1,404	1,404	Yes	LTC	No	Radial	164.35	7.92	37.37	0.00	7/1/2020	Nov-20	
Indiana	IDA_TR01	IDA061	0.40	Reverse Power Flow - min	0.40	Reverse Power Flow - max		4,493	3,787		545	407	Yes	LTC	No	Radial	112.54	0.00	7.54	0.00	7/1/2020	Nov-20	
Indiana	IDA_TR01	IDA062	0.82	Reverse Power Flow - min	0.82	Reverse Power Flow - max		4,493	3,787		1,400	1,261	Yes	LTC	No	Radial	112.54	0.00	52.44	0.00	7/1/2020	Nov-20	
Indiana	IDA_TR01	IDA063	1.10	Thermal for Gen - min	1.59	Reverse Power Flow - max		4,493	3,787		2,435	1,832	Yes	LTC	No	Radial	112.54	0.00	19.63	0.00	7/1/2020	Nov-20	
Indiana	IDA_TR01	IDA064	0.90	Thermal for Gen - min	1.16	Reverse Power Flow - max		4,493	3,787		2,046	1,733	Yes	LTC	No	Radial	112.54	0.00	32.93	0.00	7/1/2020	Nov-20	
Indiana	IDA_TR02	IDA071	0.72	Reverse Power Flow - min	0.72	Reverse Power Flow - max		7,508	5,763		1,310	1,171	Yes	LTC	No	Radial	290.22	70.35	12.76	0.00	7/1/2020	Nov-20	
Indiana	IDA_TR02	IDA072	0.90	Thermal for Gen - min	1.46	Reverse Power Flow - max		7,508	5,763		1,968	1,840	Yes	LTC	No	Radial	290.22	70.35	27.61	3.75	7/1/2020	Nov-20	
Indiana	IDA_TR02	IDA073	0.90	Thermal for Gen - min	1.41	Reverse Power Flow - max		7,508	5,763		2,002	1,600	Yes	LTC	No	Radial	290.22	70.35	249.85	66.60	7/1/2020	Nov-20	
Indiana	IDA_TR02	IDA074	0.90	Thermal for Gen - min	1.92	Reverse Power Flow - max		7,508	5,763		2,698	1,928	Yes	LTC	No	Radial	290.22	70.35	0.00	0.00	7/1/2020	Nov-20	
Jordan	JOR_TR01	JOR021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,979	1,979		937	937	No	Regulator	Yes	Radial	10,389.46	0.00	1,100.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Jordan	JOR_TR01	JOR022	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,979	1,979		1,189	1,189	No	Regulator	Yes	Radial	10,389.46	0.00	9,289.46	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Kasson	KAN_TR01	KAN022	0.20	Primary Over-Voltage - min	0.30	Primary Over-Voltage - max		1,244	1,244		992	992	No	Regulator	Yes	Radial	6,010.00	1,000.00	6,010.00	1,000.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Kasson	KAN_TR02	KAN031	0.20	Thermal for Gen - min	9.71	Breaker Relay Reduction of Reach - max		2,456	2,456		2,288	2,288	No	Regulator	Yes	Radial	6,076.74	11,017.61	6,076.74	11,017.61	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Kenyon	KEN_TR01	KEN021	0.12	Unintentional Islanding - min	0.12	Unintentional Islanding - max		283	283		219	219	No	Regulator	No	Radial	2,843.98	0.00	7.98	0.00	7/1/2021	Nov-21	
Kenyon	KEN_TR01	KEN022	0.10	Primary Over-Voltage - min	2.44	Breaker Relay Reduction of Reach - max		283	283		102	102	No	Regulator	Yes	Radial	2,843.98	0.00	2,836.00	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Kimball	KIM_TR01	KIM021	0.37	Unintentional Islanding - min	0.37	Unintentional Islanding - max		548	548		548	548	No	Regulator	No	Radial	33.30	0.00	33.30	0.00	1/1/2021	Aug-21	
Kegan Lake	KLK_TR01	KLK061	0.90	Thermal for Gen - min	1.85	Unintentional Islanding - max		2,121	1,513		2,121	1,513	Yes	LTC	No	Radial	11.80	0.00	11.80	0.00	1/1/2021	Aug-21	
Kohlman Lake	KOL_TR01	KOL061	0.50	Thermal for Gen - min	1.22	Unintentional Islanding - max		8,040	8,040		1,877	1,877	Yes	LTC	No	Radial	397.59	0.00	209.49	0.00	1/1/2021	Aug-21	
Kohlman Lake	KOL_TR01	KOL062	0.90	Thermal for Gen - min	1.64	Unintentional Islanding - max		8,040	8,040		2,138	2,039	Yes	LTC	No	Radial	397.59	0.00	35.00	0.00	1/1/2021	Aug-21	
Kohlman Lake	KOL_TR01	KOL063	0.74	Unintentional Islanding - min	0.74	Unintentional Islanding - max		8,040	8,040		1,119	920	Yes	LTC	No	Radial	397.59	0.00	0.00	0.00	1/1/2021	Aug-21	
Kohlman Lake	KOL_TR01	KOL064	1.00	Unintentional Islanding - min	1.00	Unintentional Islanding - max		8,040	8,040		1,318	1,318	Yes	LTC	No	Radial	397.59	0.00	0.00	0.00	1/1/2021	Aug-21	
Kohlman Lake	KOL_TR01	KOL065	1.10	Thermal for Gen - min	1.97	Unintentional Islanding - max		8,040	8,040		2,725	2,313	Yes	LTC	No	Radial	397.59	0.00	153.10	0.00	1/1/2021	Aug-21	
Kohlman Lake	KOL_TR02	KOL071	0.90	Thermal for Gen - min	1.09	Unintentional Islanding - max		3,176	4,317		1,612	1,360	Yes	LTC	No	Radial	100.68	0.00	51.39	0.00	1/1/2021	Aug-21	
Kohlman Lake	KOL_TR02	KOL073	0.30	Primary Over-Voltage - min	0.60	Primary Over-Voltage - max		3,176	4,317		1,711	1,237	Yes	LTC	No	Radial	100.68	0.00	27.84	0.00	1/1/2021	Aug-21	
Kohlman Lake	KOL_TR02	KOL074	0.90	Thermal for Gen - min	1.43	Unintentional Islanding - max		3,176	4,317		1,970	1,530	Yes	LTC	No	Radial	100.68	0.00	21.45	0.00	1/1/2021	Aug-21	
Lake Bavaria	LAB_TR01	LAB311	0.50	Primary Over-Voltage - min	1.88	Unintentional Islanding - max		6,736	4,472		2,408	2,209	Yes	LTC	No	Radial	153.83	5.05	47.64	0.00	1/1/2021	Aug-21	
Lake Bavaria	LAB_TR01	LAB312	0.20	Thermal for Gen - min	1.83	Unintentional Islanding - max		6,736	4,472		3,041	2,746	Yes	LTC	No	Radial	153.83	5.05	106.19	5.05	1/1/2021	Aug-21	
La Crescant	LAC_TR01	LAC062	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		2,389	2,389		1,527	1,527	No	LTC	Yes	Radial	4,342.26	1,003.75	4,127.60	1,003.75	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
La Crescant	LAC_TR01	LAC063	0.10	Primary Over-Voltage - min	0.72	Reverse Power Flow - max		2,389	2,389		1,168	1,168	No	LTC	No	Radial	4,342.26	1,003.75	214.67	0.00	7/1/2020	Nov-20	
Lake Emily	LAE_TR01	LAE061	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		705	705		705	705	Yes	Regulator	Yes	Radial	8,500.00	0.00	8,500.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Lafayette	LAF_TR01	LAF001	0.00	Unintentional Islanding - min	0.19	Unintentional Islanding - max		247	247		NA	NA	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Lake City	LAK_TR02	LAK032	0.19	Unintentional Islanding - min	0.19	Unintentional Islanding - max		#N/A	#N/A		399	399	No	Regulator	No	Radial	110.24	1,000.00	110.24	1,000.00	7/1/2021	Nov-21	Substation owned by Foreign Utility. Contractual obligations may reduce capacity and increase interconnection timelines
Lake Pulaski	LAP_TR03	LAP311	0.10	Primary Over-Voltage - min	0.49	Breaker Relay Reduction of Reach - max		5,135	4,108		5,135	4,108	Yes	LTC	Yes	Radial	26,632.29	3,005.00	26,632.29	3,005.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Lake Yankton	LAY_TR03	LAY061	0.10	Unintentional Islanding - min	0.48	Unintentional Islanding - max		794	794		794	794	Yes	Regulator	No	Radial	6.72	3,000.00	6.72	3,000.00	7/1/2021	Nov-21	
Lawrence Cre	LCR_TR01	LCR311	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		2,110	1,603		2,110	1,603	Yes	LTC	Yes	Radial	28,524.06	4,806.00	28,524.06	4,806.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Lexington	LEX_TR01	LEX061	0.50	Thermal for Gen - min	2.05	Unintentional Islanding - max		7,704	6,854		2,766	2,012	Yes	LTC	No	Radial	637.61	175.01	587.61	175.01	1/1/2021	Aug-21	
Lexington	LEX_TR01	LEX062	1.10	Thermal for Gen - min	1.15	Unintentional Islanding - max		7,704	6,854		1,581	1,581	Yes	LTC	No	Radial	637.61	175.01	0.00	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR01	LEX063	1.10	Thermal for Gen - min	1.61	Unintentional Islanding - max		7,704	6,854		2,202	1,970	Yes	LTC	No	Radial	637.61	175.01	9.99	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR01	LEX064	0.53	Unintentional Islanding - min	1.38	Unintentional Islanding - max		7,704	6,854		1,878	1,802	Yes	LTC	No	Radial	637.61	175.01	40.00	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR01	LEX065	0.07	Unintentional Islanding - min	0.83	Unintentional Islanding - max		7,704	6,854		1,100	1,100	Yes	LTC	No	Radial	637.61	175.01	0.00	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR02	LEX071	0.00	Unintentional Islanding - min	1.69	Unintentional Islanding - max		7,049	6,993		2,299	2,299	Yes	LTC	No	Radial	185.93	0.00	47.28	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR02	LEX072	0.75	Unintentional Islanding - min	0.75	Unintentional Islanding - max		7,049	6,993		671	635	Yes	LTC	No	Radial	185.93	0.00	0.00	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR02	LEX073	0.71	Unintentional Islanding - min	0.71	Unintentional Islanding - max		7,049	6,993		1,020	949	Yes	LTC	No	Radial	185.93	0.00	0.00	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR02	LEX074	0.06	Unintentional Islanding - min	1.19	Unintentional Islanding - max		7,049	6,993		6,540	6,540	Yes	LTC	No	Radial	185.93	0.00	47.96	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR02	LEX075	0.90	Thermal for Gen - min	1.23	Unintentional Islanding - max		7,049	6,993		1,838	1,838	Yes	LTC	No	Radial	185.93	0.00	90.69	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR03	LEX331	0.10	Thermal for Gen - min	2.85	Unintentional Islanding - max		14,277	14,468		3,911	3,911	Yes	LTC	No	Radial	1,207.34	6.67	0.00	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR03	LEX332	0.63	Unintentional Islanding - min	4.69	Unintentional Islanding - max		14,277	14,468		6,485	6,485	Yes	LTC	No	Radial	1,207.34	6.67	1,027.92	0.00	1/1/2021	Aug-21	
Lexington	LEX_TR03	LEX333	0.08	Unintentional Islanding - min	3.29	Unintentional Islanding - max		14,277	14,468		6,194	4,754	Yes	LTC	No	Radial	1,207.34	6.67	179.42	6.67	1/1/2021	Aug-21	
Lake Lillian	LIL_TR01	LIL021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		494	494		494	494	No	Regulator	Yes	Radial	2,011.39	1,000.00	2,011.39	1,000.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Lindstrom	LIN_TR01	LIN022	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,542	1,603		1,542	1,603	Yes	LTC	Yes	Radial	3,064.02	29.35	3,064.02	29.35	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Lindstrom	LIN_TR02	LIN031	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		4,080	3,520		4,080	3,520	Yes	LTC	No	Radial	1,152.17	4,009.99	1,152.17	4,009.99	7/1/2020	Nov-20	
Long Lake	LLK_TR01	LLK061	0.60	Primary Over-Voltage - min	1.22	Unintentional Islanding - max		4,001	3,102		1,825	1,315	Yes	Regulator	No	Radial	72.01	19.14	72.01	19.14	1/1/2021	Aug-21	
Long Lake	LLK_TR01	LLK063	0.90	Thermal for Gen - min	2.34	Unintentional Islanding - max		4,001	3,102		1,903	1,612	Yes	Regulator	No	Radial	72.01	19.14	0.00	0.00	1/1/2021	Aug-21	
Long Lake	LLK_TR02	LLK071	0.07	Unintentional Islanding - min	1.64	Unintentional Islanding - max		6,280	4,934		2,596	2,193	Yes	LTC	No	Radial	92.50	0.00	84.88	0.00	1/1/2021	Aug-21	
Long Lake	LLK_TR02	LLK072	1.20	Thermal for Gen - min	1.53	Unintentional Islanding - max		6,280	4,934		2,508	2,002	Yes	LTC	No	Radial	92.50	0.00	7.62	0.00	1/1/2021	Aug-21	
Linn Street	LNS_TR01	LNS021	0.55	Unintentional Islanding - min	0.55	Unintentional Islanding - max		835	835		804	804	No	Regulator	No	Radial	3.60	0.00	3.60	0.00	7/1/2021	Nov-21	
Linn Street	LNS_TR01	LNS022	0.01	Unintentional Islanding - min	0.01	Unintentional Islanding - max		835	835		31	31	No	Regulator	No	Radial	3.60	0.00	0.00	0.00	7/1/2021	Nov-21	
Linn Street	LNS_TR02	LNS032	0.42	Unintentional Islanding - min	0.42	Unintentional Islanding - max		1,460	1,460		678	678	No	Regulator	No	Radial	12.68	0.00	0.00	0.00	7/1/2021	Nov-21	
Linn Street	LNS_TR02	LNS033	0.49	Unintentional Islanding - min	0.49	Unintentional Islanding - max		1,460	1,460		782	782	No	Regulator	No	Radial	12.68	0.00	12.68	0.00	7/1/2021	Nov-21	
Lone Oak	LOK_TR01	LOK061	0.90	Thermal for Gen - min	1.00	Unintentional Islanding - max		7,400	6,552		2,332	2,214	Yes	LTC	No	Radial	120.83	7.62	43.47	0.00	7/1/2021	Nov-21	
Lone Oak	LOK_TR01	LOK062	0.50	Thermal for Gen - min	1.91	Unintentional Islanding - max		7,400	6,552		3,590	3,008	Yes	LTC	No	Radial	120.83	7.62	77.36	7.62	7/1/2021	Nov-21	
Lone Oak	LOK_TR01	LOK063	0.36	Unintentional Islanding - min	0.36	Unintentional Islanding - max		7,400	6,552		1,281	1,273	Yes	LTC	No	Radial	120.83	7.62	0.00	0.00	7/1/2021	Nov-21	
Lone Oak	LOK_TR02	LOK081	0.51	Unintentional Islanding - min	1.39	Unintentional Islanding - max		17,170	15,592		4,031	4,026	Yes	LTC	No	Radial	528.28	0.00	40.00	0.00	7/1/2021	Nov-21	
Lone Oak	LOK_TR02	LOK082	0.82	Unintentional Islanding - min	0.82	Unintentional Islanding - max		17,170	15,592		1,838	1,789	Yes	LTC	No	Radial	528.28	0.00	0.00	0.00	7/1/2021	Nov-21	
Lone Oak	LOK_TR02	LOK083	1.20	Primary Over-Voltage - min	1.61	Unintentional Islanding - max		17,170	15,592		2,110	2,110	Yes	LTC	No	Radial	528.28	0.00	85.00	0.00	7/1/2021	Nov-21	
Lone Oak	LOK_TR02	LOK091	1.09	Unintentional Islanding - min	1.09	Unintentional Islanding - max		17,170	15,592		2,040	1,825	Yes	LTC	No	Radial	528.28	0.00	0.00	0.00	7/1/2021	Nov-21	
Lone Oak	LOK_TR02	LOK092	1.01	Unintentional Islanding - min	1.01	Unintentional Islanding - max		17,170	15,592		3,324	3,314	Yes	LTC	No	Radial	528.28	0.00	179.56	0.00	7/1/2021	Nov-21	
Lone Oak	LOK_TR02	LOK093	0.40	Thermal for Gen - min	1.05	Unintentional Islanding - max		17,170	15,592		2,837	2,492	Yes	LTC	No	Radial	528.28	0.00	223.72	0.00	7/1/2021	Nov-21	
Lowry	LOW_TR01	LOW021	0.00	Primary Over-Voltage - min	0.58	Breaker Relay Reduction of Reach - max		879	879		879	879	Yes	Regulator	Yes	Radial	9,004.00	0.00	9,004.00	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Lester Prarie	LSP_TR01	LSP021	0.00	Thermal for Gen - min	1.03	Breaker Relay Reduction of Reach - max		1,722	1,722		1,033	1,033	No	Regulator	Yes	Radial	7,168.65	3,427.00	7,056.65	2,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Lester Prarie	LSP_TR01	LSP022	0.10	Primary Over-Voltage - min	0.58	Breaker Relay Reduction of Reach - max		1,722	1,722		449	449	No	Regulator	No	Radial	7,168.65	3,427.00	112.00	1,427.00	7/1/2020	Nov-20	
Maple Lake	MAP_TR01	MAP061	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		796	796		796	796	No	Regulator	No	Radial	20.00	0.00	20.00	0.00	7/1/2021	Nov-21	
Mazeppa	MAZ_TR01	MAZ021	0.10	Primary Over-Voltage - min	0.49	Unintentional Islanding - max		477	477		477	477	No	Regulator	No	Radial	47.74	1,000.00	47.74	1,000.00	1/1/2021	Aug-21	
Medford Junc	MDF_TR01	MDF021	0.30	Primary Over-Voltage - min	0.40	Primary Over-Voltage - max		996	996		645	645	No	Regulator	Yes	Radial	2,000.00	0.00	2,000.00	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Midtown	MDT_TR01	MDT061	0.90	Thermal for Gen - min	1.58	Reverse Power Flow - max		12,130	10,530		2,257	1,982	Yes	LTC	No	Radial	456.22	0.00	0.00	0.00	7/1/2020	Nov-20	
Midtown	MDT_TR01	MDT062	0.44	Reverse Power Flow - min	0.44	Reverse Power Flow - max		12,130	10,530		532	465	Yes	LTC	No	Radial	456.22	0.00	248.75	0.00	7/1/2020	Nov-20	
Midtown	MDT_TR01	MDT067	0.90	Thermal for Gen - min	2.41	Reverse Power Flow - max		12,130	10,530		3,329	2,566	Yes	LTC	No	Radial	456.22	0.00	15.20	0.00	7/1/2020	Nov-20	
Midtown	MDT_TR01	MDT071	0.20	Thermal for Gen - min	0.57	Reverse Power Flow - max		12,130	10,530		778	651	Yes	LTC	No	Radial	456.22	0.00	92.28	0.00	7/1/2020	Nov-20	
Midtown	MDT_TR01	MDT073	1.05	Reverse Power Flow - min	1.05	Reverse Power Flow - max		12,130	10,530		1,706	1,448	Yes	LTC	No	Radial	456.22	0.00	50.49	0.00	7/1/2020	Nov-20	
Midtown	MDT_TR01	MDT074	1.00	Thermal for Gen - min	1.38	Reverse Power Flow - max		12,130	10,530		2,123	1,664	Yes	LTC	No	Radial	456.22	0.00	42.28	0.00	7/1/2020	Nov-20	
Midtown	MDT_TR01	MDT077	1.10	Thermal for Gen - min	1.65	Reverse Power Flow - max		12,130	10,530		2,149	2,030	Yes	LTC	No	Radial	456.22	0.00	7.23	0.00	7/1/2020	Nov-20	
Meire Grove	MEI_TR01	MEI021	0.10	Primary Over-Voltage - min	0.26	Reverse Power Flow - max		314	314		314	314	No	Regulator	Yes	Radial	327.75	2,324.00	327.75	2,324.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Meeker	MEK_TR01	MEK021	0.04	Unintentional Islanding - min	0.04	Unintentional Islanding - max		NA	NA		NA	NA	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	Substation owned by Foreign Utility. Contractual obligations may reduce capacity and increase interconnection timelines
Medicine Lake	MEL_TR01	MEL061	0.80	Reverse Power Flow - min	0.80	Reverse Power Flow - max		13,084	11,059		1,193	1,090	Yes	LTC	No	Radial	434.64	3.75	127.08	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR01	MEL062	0.90	Thermal for Gen - min	1.08	Reverse Power Flow - max		13,084	11,059		1,684	1,424	Yes	LTC	No	Radial	434.64	3.75	10.12	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR01	MEL063	0.16	Reverse Power Flow - min	0.16	Reverse Power Flow - max		13,084	11,059		285	253	Yes	LTC	No	Radial	434.64	3.75	0.00	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR01	MEL064	0.80	Thermal for Gen - min	1.45	Reverse Power Flow - max		13,084	11,059		2,053	2,036	Yes	LTC	No	Radial	434.64	3.75	80.00	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR01	MEL065	0.34	Reverse Power Flow - min	0.34	Reverse Power Flow - max		13,084	11,059		473	421	Yes	LTC	No	Radial	434.64	3.75	0.00	0.00	7/1/2020	Nov-20	

PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Medicine Lake	MEL_TR01	MEL066	0.42	Reverse Power Flow - min	0.42	Reverse Power Flow - max		13,084	11,059		576	406	Yes	LTC	No	Radial	434.64	3.75	0.00	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR01	MEL067	0.90	Thermal for Gen - min	2.04	Reverse Power Flow - max		13,084	11,059		1,791	1,579	Yes	LTC	No	Radial	434.64	3.75	12.76	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR01	MEL068	0.90	Thermal for Gen - min	1.24	Reverse Power Flow - max		13,084	11,059		1,771	1,395	Yes	LTC	No	Radial	434.64	3.75	188.29	3.75	7/1/2020	Nov-20	
Medicine Lake	MEL_TR01	MEL069	1.00	Thermal for Gen - min	1.99	Reverse Power Flow - max		13,084	11,059		2,630	2,246	Yes	LTC	No	Radial	434.64	3.75	16.40	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR02	MEL071	1.05	Thermal for Gen - min	1.15	Reverse Power Flow - max		19,104	15,098		1,516	1,493	Yes	LTC	No	Radial	589.08	36.78	7.63	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR02	MEL072	0.50	Thermal for Gen - min	1.67	Reverse Power Flow - max		19,104	15,098		2,436	2,070	Yes	LTC	No	Radial	589.08	36.78	18.42	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR02	MEL073	0.90	Thermal for Gen - min	1.78	Reverse Power Flow - max		19,104	15,098		2,623	2,046	Yes	LTC	No	Radial	589.08	36.78	305.06	33.30	7/1/2020	Nov-20	
Medicine Lake	MEL_TR02	MEL074	0.90	Thermal for Gen - min	2.32	Unintentional Islanding - max		19,104	15,098		2,604	2,010	Yes	LTC	No	Radial	589.08	36.78	150.26	0.00	1/1/2021	Aug-21	
Medicine Lake	MEL_TR02	MEL075	0.90	Thermal for Gen - min	1.86	Reverse Power Flow - max		19,104	15,098		2,469	1,940	Yes	LTC	No	Radial	589.08	36.78	19.79	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR02	MEL076	1.20	Thermal for Gen - min	1.44	Reverse Power Flow - max		19,104	15,098		1,887	1,610	Yes	LTC	No	Radial	589.08	36.78	0.00	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR02	MEL077	0.90	Thermal for Gen - min	1.33	Reverse Power Flow - max		19,104	15,098		1,831	1,529	Yes	LTC	No	Radial	589.08	36.78	40.00	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR02	MEL078	0.90	Thermal for Gen - min	1.36	Reverse Power Flow - max		19,104	15,098		1,864	1,504	Yes	LTC	No	Radial	589.08	36.78	37.48	3.48	7/1/2020	Nov-20	
Medicine Lake	MEL_TR02	MEL079	0.90	Reverse Power Flow - min	0.90	Reverse Power Flow - max		19,104	15,098		1,357	1,277	Yes	LTC	No	Radial	589.08	36.78	10.44	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR03	MEL081	0.90	Thermal for Gen - min	1.04	Reverse Power Flow - max		11,720	8,517		1,657	1,210	Yes	LTC	No	Radial	528.02	4.93	30.36	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR03	MEL082	0.90	Thermal for Gen - min	1.22	Reverse Power Flow - max		11,720	8,517		1,585	1,338	Yes	LTC	No	Radial	528.02	4.93	40.00	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR03	MEL083	0.90	Thermal for Gen - min	1.76	Reverse Power Flow - max		11,720	8,517		2,267	2,037	Yes	LTC	No	Radial	528.02	4.93	0.00	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR03	MEL087	0.06	Reverse Power Flow - min	0.06	Reverse Power Flow - max		11,720	8,517		514	442	Yes	LTC	No	Radial	528.02	4.93	323.27	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR03	MEL088	1.30	Thermal for Gen - min	2.12	Reverse Power Flow - max		11,720	8,517		1,347	1,188	Yes	LTC	No	Radial	528.02	4.93	120.43	0.00	7/1/2020	Nov-20	
Medicine Lake	MEL_TR03	MEL089	1.50	Thermal for Gen - min	1.64	Reverse Power Flow - max		11,720	8,517		2,309	2,127	Yes	LTC	No	Radial	528.02	4.93	13.97	4.93	7/1/2020	Nov-20	
Morgan	MGN_TR01	MGN211	0.00	Breaker Relay Reduction of Reach - min	9.58	Breaker Relay Reduction of Reach - max		1,421	1,421		1,421	1,421	No	Regulator	Yes	Radial	3,065.32	0.00	3,065.32	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Mayhew Lake	MHW_TR01	MHW311	0.10	Primary Over-Voltage - min	10.00	Primary Over-Voltage - max		10,194	8,388		5,055	4,820	Yes	LTC	Yes	Radial	22,722.20	13,007.44	12,055.77	13,007.44	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Mayhew Lake	MHW_TR01	MHW312	0.00	Unintentional Islanding - min	1.64	Unintentional Islanding - max		10,194	8,388		2,306	2,306	Yes	LTC	No	Radial	22,722.20	13,007.44	10,666.43	0.00	1/1/2021	Aug-21	
Mound	MND_TR01	MND061	0.50	Thermal for Gen - min	0.82	Unintentional Islanding - max		6,738	5,217		1,369	1,113	Yes	LTC	No	Radial	163.75	39.47	36.79	0.00	7/1/2021	Nov-21	
Mound	MND_TR01	MND062	0.24	Unintentional Islanding - min	2.08	Unintentional Islanding - max		6,738	5,217		3,162	2,510	Yes	LTC	No	Radial	163.75	39.47	30.38	7.20	7/1/2021	Nov-21	
Mound	MND_TR01	MND063	0.19	Unintentional Islanding - min	1.39	Unintentional Islanding - max		6,738	5,217		2,222	1,746	Yes	LTC	No	Radial	163.75	39.47	96.58	32.27	7/1/2021	Nov-21	
Mound	MND_TR02	MND071	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		4,850	3,904		1,875	1,516	Yes	LTC	No	Radial	48.72	5.76	33.75	5.76	7/1/2021	Nov-21	
Mound	MND_TR02	MND072	0.35	Unintentional Islanding - min	1.90	Unintentional Islanding - max		4,850	3,904		3,013	2,280	Yes	LTC	No	Radial	48.72	5.76	14.97	0.00	7/1/2021	Nov-21	
Minnesota Lak	MNL_TR01	MNL001	0.10	Primary Over-Voltage - min	1.64	Breaker Relay Reduction of Reach - max		336	336		294	294	No	Regulator	Yes	Radial	1,840.00	0.00	1,840.00	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Minnesota Val	MNV_TR07	MNV211	0.30	Primary Over-Voltage - min	4.90	Breaker Relay Reduction of Reach - max		600	600		600	600	Yes	Regulator	Yes	Radial	3,000.00	0.00	3,000.00	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Moore Lake	MOL_TR01	MOL061	0.50	Primary Over-Voltage - min	0.83	Unintentional Islanding - max		18,956	15,181		1,924	1,334	Yes	LTC	No	Radial	215.83	3.75	0.00	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR01	MOL062	0.72	Unintentional Islanding - min	0.72	Unintentional Islanding - max		18,956	15,181		2,474	2,433	Yes	LTC	No	Radial	215.83	3.75	80.00	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR01	MOL063	0.60	Thermal for Gen - min	1.73	Unintentional Islanding - max		18,956	15,181		3,142	2,199	Yes	LTC	No	Radial	215.83	3.75	0.00	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR01	MOL064	0.90	Primary Over-Voltage - min	1.29	Unintentional Islanding - max		18,956	15,181		1,828	1,776	Yes	LTC	No	Radial	215.83	3.75	0.00	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR01	MOL065	0.81	Unintentional Islanding - min	0.81	Unintentional Islanding - max		18,956	15,181		1,485	1,365	Yes	LTC	No	Radial	215.83	3.75	0.00	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR01	MOL066	0.16	Unintentional Islanding - min	0.97	Unintentional Islanding - max		18,956	15,181		2,535	1,892	Yes	LTC	No	Radial	215.83	3.75	14.12	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR01	MOL067	0.57	Unintentional Islanding - min	0.57	Unintentional Islanding - max		18,956	15,181		1,321	1,100	Yes	LTC	No	Radial	215.83	3.75	62.63	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR01	MOL068	0.40	Primary Over-Voltage - min	0.54	Unintentional Islanding - max		18,956	15,181		2,163	1,860	Yes	LTC	No	Radial	215.83	3.75	59.08	3.75	1/1/2021	Aug-21	
Moore Lake	MOL_TR01	MOL069	0.04	Unintentional Islanding - min	0.04	Unintentional Islanding - max		18,956	15,181		342	276	Yes	LTC	No	Radial	215.83	3.75	0.00	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR02	MOL071	0.45	Unintentional Islanding - min	0.45	Unintentional Islanding - max		15,814	12,630		1,855	1,538	Yes	LTC	No	Radial	1,332.77	0.00	429.78	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR02	MOL072	0.08	Unintentional Islanding - min	0.77	Unintentional Islanding - max		15,814	12,630		2,307	1,715	Yes	LTC	No	Radial	1,332.77	0.00	43.78	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR02	MOL073	0.50	Primary Over-Voltage - min	0.74	Unintentional Islanding - max		15,814	12,630		2,138	1,965	Yes	LTC	No	Radial	1,332.77	0.00	780.22	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR02	MOL074	0.14	Unintentional Islanding - min	0.93	Unintentional Islanding - max		15,814	12,630		1,571	1,392	Yes	LTC	No	Radial	1,332.77	0.00	0.00	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR02	MOL076	0.80	Thermal for Gen - min	2.19	Unintentional Islanding - max		15,814	12,630		2,732	2,437	Yes	LTC	No	Radial	1,332.77	0.00	3.75	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR02	MOL077	0.90	Thermal for Gen - min	1.19	Unintentional Islanding - max		15,814	12,630		1,272	1,170	Yes	LTC	No	Radial	1,332.77	0.00	0.00	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR02	MOL078	0.60	Primary Over-Voltage - min	0.71	Unintentional Islanding - max		15,814	12,630		2,159	1,838	Yes	LTC	No	Radial	1,332.77	0.00	65.60	0.00	1/1/2021	Aug-21	
Moore Lake	MOL_TR02	MOL079	0.60	Primary Over-Voltage - min	0.65	Unintentional Islanding - max		15,814	12,630		1,888	1,635	Yes	LTC	No	Radial	1,332.77	0.00	9.65	0.00	1/1/2021	Aug-21	
Merriam Park	MPK_TR01	MPK061	1.65	Reverse Power Flow - min	1.65	Reverse Power Flow - max		11,554	8,446		3,158	2,807	Yes	LTC	No	Radial	476.29	72.31	0.00	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR01	MPK062	0.90	Thermal for Gen - min	1.00	Reverse Power Flow - max		11,554	8,446		1,304	1,140	Yes	LTC	No	Radial	476.29	72.31	63.51	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR01	MPK063	0.60	Thermal for Gen - min	2.52	Reverse Power Flow - max		11,554	8,446		3,245	3,061	Yes	LTC	No	Radial	476.29	72.31	110.82	21.82	7/1/2020	Nov-20	
Merriam Park	MPK_TR01	MPK064	1.00	Thermal for Gen - min	1.18	Reverse Power Flow - max		11,554	8,446		1,503	1,360	Yes	LTC	No	Radial	476.29	72.31	45.93	6.96	7/1/2020	Nov-20	
Merriam Park	MPK_TR01	MPK065	0.60	Thermal for Gen - min	1.52	Reverse Power Flow - max		11,554	8,446		2,193	2,110	Yes	LTC	No	Radial	476.29	72.31	31.11	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR01	MPK066	0.86	Reverse Power Flow - min	0.86	Reverse Power Flow - max		11,554	8,446		1,105	707	Yes	LTC	No	Radial	476.29	72.31	0.00	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR01	MPK067	0.90	Thermal for Gen - min	1.68	Reverse Power Flow - max		11,554	8,446		2,102	1,749	Yes	LTC	No	Radial	476.29	72.31	35.00	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR01	MPK068	0.50	Primary Over-Voltage - min	1.44	Breaker Relay Reduction of Reach - max		11,554	8,446		2,927	2,354	Yes	LTC	No	Radial	476.29	72.31	189.92	43.53	7/1/2020	Nov-20	
Merriam Park	MPK_TR02	MPK071	0.90	Thermal for Gen - min	1.34	Reverse Power Flow - max		11,089	9,660		1,679	1,100	Yes	LTC	No	Radial	651.09	11.91	64.91	11.91	7/1/2020	Nov-20	
Merriam Park	MPK_TR02	MPK072	1.44	Reverse Power Flow - min	1.44	Reverse Power Flow - max		11,089	9,660		2,763	2,763	Yes	LTC	No	Radial	651.09	11.91	0.00	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR02	MPK073	0.69	Reverse Power Flow - min	0.69	Reverse Power Flow - max		11,089	9,660		1,053	906	Yes	LTC	No	Radial	651.09	11.91	9.84	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR02	MPK074	1.00	Thermal for Gen - min	2.18	Reverse Power Flow - max		11,089	9,660		3,306	2,702	Yes	LTC	No	Radial	651.09	11.91	116.57	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR02	MPK075	0.90	Thermal for Gen - min	1.47	Reverse Power Flow - max		11,089	9,660		1,903	1,703	Yes	LTC	No	Radial	651.09	11.91	406.80	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR02	MPK076	1.14	Reverse Power Flow - min	1.14	Reverse Power Flow - max		11,089	9,660		1,581	1,432	Yes	LTC	No	Radial	651.09	11.91	17.94	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR02	MPK077	1.50	Thermal for Gen - min	2.47	Reverse Power Flow - max		11,089	9,660		3,158	3,126	Yes	LTC	No	Radial	651.09	11.91	5.00	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR02	MPK078	0.10	Primary Over-Voltage - min	0.70	Breaker Relay Reduction of Reach - max		11,089	9,660		2,864	2,596	Yes	LTC	No	Radial	651.09	11.91	30.03	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR03	MPK081	1.44	Reverse Power Flow - min	1.44	Reverse Power Flow - max		13,314	9,982		2,766	2,766	Yes	LTC	No	Radial	677.07	144.42	0.00	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR03	MPK082	0.50	Primary Over-Voltage - min	1.20	Breaker Relay Reduction of Reach - max		13,314	9,982		2,247	1,879	Yes	LTC	No	Radial	677.07	144.42	73.66	3.75	7/1/2020	Nov-20	
Merriam Park	MPK_TR03	MPK083	0.40	Primary Over-Voltage - min	1.41	Breaker Relay Reduction of Reach - max		13,314	9,982		2,550	2,335	Yes	LTC	No	Radial	677.07	144.42	57.97	100.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR03	MPK084	0.20	Primary Over-Voltage - min	0.91	Breaker Relay Reduction of Reach - max		13,314	9,982		1,970	1,655	Yes	LTC	No	Radial	677.07	144.42	72.71	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR03	MPK085	0.90	Thermal for Gen - min	1.42	Reverse Power Flow - max		13,314	9,982		1,868	1,522	Yes	LTC	No	Radial	677.07	144.42	314.01	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR03	MPK086	0.66	Reverse Power Flow - min	0.66	Reverse Power Flow - max		13,314	9,982		922	922	Yes	LTC	No	Radial	677.07	144.42	26.76	0.00	7/1/2020	Nov-20	
Merriam Park	MPK_TR03	MPK087	0.90	Thermal for Gen - min	1.83	Reverse Power Flow - max		13,314	9,982		2,550	2,280	Yes	LTC	No	Radial	677.07	144.42	131.96	40.67	7/1/2020	Nov-20	
Mapleton	MPN_TR01	MPN081	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		982	982		973	973	No	Regulator	Yes	Radial	6,548.70	1,000.00	6,548.70	1,000.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Meridan	MRN_TR01	MRN021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		464	464		368	368	No	Regulator	Yes	Radial	3,435.57	0.00	3,435.57	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Main Street	MST_TR01	MST063	1.49	Reverse Power Flow - min	1.49	Reverse Power Flow - max		7,310	5,087		0	0	No	LTC	No	Radial	254.61	0.00	0.00	0.00	7/1/2020	Nov-20	
Main Street	MST_TR01	MST064	0.03	Reverse Power Flow - min	0.03	Reverse Power Flow - max		7,310	5,087		623	604	Yes	LTC	No	Radial	254.61	0.00	0.00	0.00	7/1/2020	Nov-20	
Main Street	MST_TR01	MST066	0.90	Thermal for Gen - min	1.98	Reverse Power Flow - max		7,310	5,087		1,847	1,410	Yes	LTC	No	Radial	254.61	0.00	28.72	0.00	7/1/2020	Nov-20	
Main Street	MST_TR01	MST068	0.90	Thermal for Gen - min	1.35	Reverse Power Flow - max		7,310	5,087		1,953	1,605	Yes	LTC	No	Radial	254.61	0.00	211.38	0.00	7/1/2020	Nov-20	
Main Street	MST_TR01	MST069	0.90	Thermal for Gen - min	1.02	Reverse Power Flow - max		7,310	5,087		1,405	1,300	Yes	LTC	No	Radial	254.61	0.00	0.00	0.00	7/1/2020	Nov-20	
Main Street	MST_TR02	MST070	0.90	Thermal for Gen - min	1.63	Reverse Power Flow - max		13,328	11,305		2,499	2,387	Yes	LTC	No	Radial	424.99	0.00	51.84	0.00	7/1/2020	Nov-20	
Main Street	MST_TR02	MST071	1.00	Thermal for Gen - min	2.26	Reverse Power Flow - max		13,328	11,305		3,053	2,634	Yes	LTC	No	Radial	424.99	0.00	79.69	0.00	7/1/2020	Nov-20	
Main Street	MST_TR02	MST074	0.14	Reverse Power Flow - min	0.14	Reverse Power Flow - max		13,328	11,305		211	203	Yes	LTC	No	Radial	424.99	0.00	0.00	0.00	7/1/2020	Nov-20	
Main Street	MST_TR02	MST075	0.90	Thermal for Gen - min	2.57	Reverse Power Flow - max		13,328	11,305		3,564	2,867	Yes	LTC	No	Radial	424.99	0.00	264.15	0.00	7/1/2020	Nov-20	
Main Street	MST_TR02	MST076	0.40	Thermal for Gen - min	0.79	Reverse Power Flow - max		13,328	11,305		1,041	885	Yes	LTC	No	Radial	424.99	0.00	29.31	0.00	7/1/2020	Nov-20	
Main Street	MST_TR01	MST080	0.10	Thermal for Gen - min	0.46	Breaker Relay Reduction of Reach - max		7,310	5,087		1,633	1,441	Yes	LTC	No	Radial	254.61	0.00	14.51	0.00	7/1/2020	Nov-20	
Montrose	MTR_TR01	MTR021	0.40	Primary Over-Voltage - min	5.52	Breaker Relay Reduction of Reach - max		1,478	1,478		1,478	1,478	No	Regulator	Yes	Radial	8,551.63	0.00	8,551.63	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Montevideo	MTV_TR01	MTV001	0.10	Primary Over-Voltage - min	0.10	Primary Over-Voltage - max		929	929		225	225	No	Regulator	No	Radial	6.45	0.00	0.00	0.00	1/1/2021	Aug-21	
Montevideo	MTV_TR01	MTV002	0.30	Primary Over-Voltage - min	0.39	Unintentional Islanding - max		929	929		330	330	No	Regulator	No	Radial	6.45	0.00	6.45	0.00	1/1/2021	Aug-21	
Montevideo	MTV_TR01	MTV003	0.39	Unintentional Islanding - min	0.39	Unintentional Islanding - max		929	929		375	375	No	Regulator	No	Radial	6.45	0.00	0.00	0.00	1/1/2021	Aug-21	
Montevideo	MTV_TR02	MTV021	0.03	Primary Over-Voltage - min	0.54	Primary Over-Voltage - max		1,123	1,123		674	674	No	LTC	Yes	Radial	5,000.00	0.00	0.00	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Montevideo	MTV_TR02	MTV022	0.00	Thermal for Gen - min	0.43	Primary Over-Voltage - max		1,123	1,123		449	449	No	LTC	Yes	Radial	5,000.00	0.00	5,000.00	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Morristown	MTW_TR01	MTW021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		554	554		553	553	No	Regulator	Yes	Radial	4,045.95	1,839.99	4,045.95	1,839.99	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Maynard	MYN_TR01	MYN021	0.00	Breaker Relay Reduction of Reach - min	0.00	Breaker Relay Reduction of Reach - max		516	516		516	516	No	Regulator	Yes	Radial	2,000.00	0.00	2,000.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Nerstrand	NER_TR01	NER021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		341	341		341	341	No	Regulator	Yes	Radial	3,017.61	9.94	3,017.61	9.94	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Nine Mile Cre	NMC_TR01	NMC063	2.12	Unintentional Islanding - min	2.12	Unintentional Islanding - max		10,765	10,765		5,358	5,354	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Nine Mile Cre	NMC_TR01	NMC064	3.23	Unintentional Islanding - min	3.23	Unintentional Islanding - max		10,765	10,765		5,309	5,309	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Nine Mile Cre	NMC_TR02	NMC082	0.02	Unintentional Islanding - min	0.23	Unintentional Islanding - max		12,246	8,641		3,429	3,037	Yes	LTC	No	Radial	54.29	0.00	48.78	0.00	1/1/2021	Aug-21	
Nine Mile Cre	NMC_TR02	NMC083	0.90	Thermal for Gen - min	1.04	Unintentional Islanding - max		12,246	8,641		2,670	2,286	Yes	LTC	No	Radial	54.29	0.00	5.51	0.00	1/1/2021	Aug-21	
Nine Mile Cre	NMC_TR02	NMC092	0.90	Thermal for Gen - min	1.86	Unintentional Islanding - max		12,246	8,641		2,207	2,204	Yes	LTC	No	Radial	54.29	0.00	0.00	0.00	1/1/2021	Aug-21	
Nine Mile Cre	NMC_TR02	NMC093	1.10	Thermal for Gen - min	2.95	Unintentional Islanding - max		12,246	8,641		2,598	2,262	Yes	LTC	No	Radial	54.29	0.00	0.00	0.00	1/1/2021	Aug-21	
Northfield	NOF_TR01	NOF061	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		4,724	4,724		2,386	2,386	No	LTC	Yes	Radial	12,712.43	6,011.39	12,712.43	6,011.39	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Northfield	NOF_TR01	NOF062	0.70	Thermal for Gen - min	1.35	Unintentional Islanding - max		4,724	4,724		1,502	1,502	Yes	LTC	No	Radial	12,712.43	6,011.39	0.00	0.00	1/1/2021	Aug-21	
Northfield	NOF_TR02	NOF071	0.00	Primary Over-Voltage - min	1.41	Primary Over-Voltage - max		6,163	4,447		3,260	2,234	No	LTC	Yes	Radial	7,751.10	5,000.00	7,701.87	4,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Northfield	NOF_TR02	NOF072	0.20	Thermal for Gen - min	2.50	Unintentional Islanding - max		6,163	4,447		1,913	1,913	Yes	LTC	No	Radial	7,751.10	5,000.00	31.35	1,000.00	1/1/2021	Aug-21	
Northfield	NOF_TR02	NOF073	0.68	Unintentional Islanding - min	0.68	Unintentional Islanding - max		6,163	4,447		680	582	Yes	LTC	No	Radial	7,751.10	5,000.00	17.88	0.00	1/1/2021	Aug-21	
Oakdale	OAD_TR01	OAD061	0.90	Thermal for Gen - min	1.56	Unintentional Islanding - max		8,481	6,434		2,138	2,138	Yes	LTC	No	Radial	193.18	0.00	28.54	0.00	1/1/2021	Aug-21	
Oakdale	OAD_TR01	OAD062	0.71	Unintentional Islanding - min	0.71	Unintentional Islanding - max		8,481	6,434		1,020	1,020	Yes	LTC	No	Radial	193.18	0.00	5.04	0.00	1/1/2021	Aug-21	
Oakdale	OAD_TR01	OAD063	0.90	Thermal for Gen - min	1.73	Unintentional Islanding - max		8,481	6,434		2,435	2,159	Yes	LTC	No	Radial	193.18	0.00	21.80	0.00	1/1/2021	Aug-21	
Oakdale	OAD_TR01	OAD064	1.20	Thermal for Gen - min	1.59	Unintentional Islanding - max		8,481	6,434		2,309	1,712	Yes	LTC	No	Radial	193.18	0.00	4.80	0.00	1/1/2021	Aug-21	
Oakdale	OAD_TR01	OAD065	0.26	Unintentional Islanding - min	1.40	Unintentional Islanding - max		8,481	6,434		2,121	2,121	Yes	LTC	No	Radial	193.18	0.00	133.00	0.00	1/1/2021	Aug-21	
Oakdale	OAD_TR02	OAD071	0.50	Thermal for Gen - min	1.73	Unintentional Islanding - max		7,266	4,185		2,220	1,628	Yes	LTC	No	Radial	355.43	107.05	25.13	0.00	1/1/2021	Aug-21	
Oakdale	OAD_TR02	OAD072	0.62	Unintentional Islanding - min	0.63	Unintentional Islanding - max		7,266	4,185		2,354	2,002	Yes	LTC	No	Radial	355.43	107.05	22.40	5.05	1/1/2021	Aug-21	
Oakdale	OAD_TR02	OAD073	0.90	Thermal for Gen - min	1.11	Unintentional Islanding - max		7,266	4,185		1,649	1,432	Yes	LTC	No	Radial	355.43	107.05	55.93	0.00	1/1/2021	Aug-21	
Oakdale	OAD_TR02	OAD074	0.03	Unintentional Islanding - min	0.03	Unintentional Islanding - max		7,266	4,185		1,746	1,456	Yes	LTC	No	Radial	355.43	107.05	174.10	102.00	1/1/2021	Aug-21	
Oakdale	OAD_TR02	OAD075	0.60	Unintentional Islanding - min	2.71	Unintentional Islanding - max		7,266	4,185		3,443	1,789	Yes	LTC	No	Radial	355.43	107.05	77.88	0.00	1/1/2021	Aug-21	
Oak Park	OPK_TR07	OPK065	0.40	Thermal for Gen - min	0.81	Unintentional Islanding - max		6,763	6,430		1,872	1,238	Yes	LTC	No	Radial	37.07	0.00	37.07	0.00	7/1/2021	Nov-21	
Oak Park	OPK_TR07	OPK066	0.31	Unintentional Islanding - min	0.31	Unintentional Islanding - max		6,763	6,430		881	880	Yes	LTC	No	Radial	37.07	0.00	0.00	0.00	7/1/2021	Nov-21	
Oak Park	OPK_TR07	OPK067	0.02	Unintentional Islanding - min	1.18	Unintentional Islanding - max		6,763	6,430		1,534	1,534	Yes	LTC	No	Radial	37.07	0.00	0.00	0.00	7/1/2021	Nov-21	
Oak Park	OPK_TR08	OPK071	0.69	Unintentional Islanding - min	0.69	Unintentional Islanding - max		7,251	7,281		870	739	Yes	LTC	No	Radial	4,184.67	3.75	3.00	0.00	7/1/2021	Nov-21	
Oak Park	OPK_TR08	OPK072	0.34	Unintentional Islanding - min	0.34	Unintentional Islanding - max		7,251	7,281		1,288	1,209	Yes	LTC	No	Radial	4,184.67	3.75	6.60	0.00	7/1/2021	Nov-21	
Oak Park	OPK_TR08	OPK073	0.22	Unintentional Islanding - min	0.45	Unintentional Islanding - max		7,251	7,281		2,020	1,955	Yes	LTC	No	Radial	4,184.67	3.75	154.31	0.00	7/1/2021	Nov-21	
Oak Park	OPK_TR08	OPK074	0.84	Unintentional Islanding - min	0.84	Unintentional Islanding - max		7,251	7,281		1,976	1,658	Yes	LTC	No	Radial	4,184.67	3.75	0.00	0.00	7/1/2021	Nov-21	
Oak Park	OPK_TR08	OPK075	0.63	Unintentional Islanding - min	0.63	Unintentional Islanding - max		7,251	7,281		1,019	1,019	Yes	LTC	No	Radial	4,184.67	3.75	0.00	0.00	7/1/2021	Nov-21	
Oak Park	OPK_TR08	OPK077	0.14	Unintentional Islanding - min	0.67	Unintentional Islanding - max		7,251	7,281		3,321	2,665	Yes	LTC	No	Radial	4,184.67	3.75	4,020.76	3.75	7/1/2021	Nov-21	
Orono	ORO_TR01	ORO061	0.29	Unintentional Islanding - min	0.29	Unintentional Islanding - max		5,192	4,472		2,040	1,612	Yes	LTC	No	Radial	838.68	43.53	231.24	0.00	7/1/2021	Nov-21	
Orono	ORO_TR01	ORO062	0.62	Unintentional Islanding - min	0.62	Unintentional Islanding - max		5,192	4,472		3,354	2,720	Yes	LTC	No	Radial	838.68	43.53	607.44	43.53	7/1/2021	Nov-21	
Osseo	OSS_TR01	OSS061	0.90	Thermal for Gen - min	1.51	Unintentional Islanding - max		14,186	12,434		2,154	2,154	Yes	LTC	No	Radial	156.50	0.00	0.00	0.00	7/1/2021	Nov-21	

PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Osseo	OSS_TR01	OSS062	0.90	Thermal for Gen - min	2.23	Reverse Power Flow - max		14,186	12,434		3,027	2,433	Yes	LTC	No	Radial	156.50	0.00	56.24	0.00	7/1/2020	Nov-20	
Osseo	OSS_TR01	OSS063	0.50	Primary Over-Voltage - min	0.64	Reverse Power Flow - max		14,186	12,434		1,005	906	Yes	LTC	No	Radial	156.50	0.00	6.75	0.00	7/1/2020	Nov-20	
Osseo	OSS_TR01	OSS064	0.50	Thermal for Gen - min	1.09	Unintentional Islanding - max		14,186	12,434		1,924	1,860	Yes	LTC	No	Radial	156.50	0.00	10.32	0.00	7/1/2021	Nov-21	
Osseo	OSS_TR01	OSS065	1.50	Thermal for Gen - min	2.35	Reverse Power Flow - max		14,186	12,434		2,983	2,687	Yes	LTC	No	Radial	156.50	0.00	5.00	0.00	7/1/2020	Nov-20	
Osseo	OSS_TR01	OSS066	1.50	Thermal for Gen - min	1.51	Reverse Power Flow - max		14,186	12,434		2,022	1,726	Yes	LTC	No	Radial	156.50	0.00	78.20	0.00	7/1/2020	Nov-20	
Osseo	OSS_TR02	OSS071	0.90	Thermal for Gen - min	1.43	Reverse Power Flow - max		11,369	9,817		1,879	1,140	Yes	LTC	No	Radial	644.34	0.00	185.62	0.00	7/1/2020	Nov-20	
Osseo	OSS_TR02	OSS072	0.34	Reverse Power Flow - min	0.34	Reverse Power Flow - max		11,369	9,817		721	632	Yes	LTC	No	Radial	644.34	0.00	422.60	0.00	7/1/2020	Nov-20	
Osseo	OSS_TR02	OSS073	0.70	Primary Over-Voltage - min	1.34	Unintentional Islanding - max		11,369	9,817		1,844	1,603	Yes	LTC	No	Radial	644.34	0.00	19.00	0.00	7/1/2021	Nov-21	
Osseo	OSS_TR02	OSS074	0.57	Reverse Power Flow - min	0.57	Reverse Power Flow - max		11,369	9,817		721	721	Yes	LTC	No	Radial	644.34	0.00	0.00	0.00	7/1/2020	Nov-20	
Osseo	OSS_TR02	OSS075	1.40	Thermal for Gen - min	1.53	Unintentional Islanding - max		11,369	9,817		1,942	1,844	Yes	LTC	No	Radial	644.34	0.00	0.00	0.00	7/1/2021	Nov-21	
Osseo	OSS_TR02	OSS076	1.07	Reverse Power Flow - min	1.07	Reverse Power Flow - max		11,369	9,817		1,414	1,020	Yes	LTC	No	Radial	644.34	0.00	5.00	0.00	7/1/2020	Nov-20	
Osseo	OSS_TR02	OSS077	0.29	Reverse Power Flow - min	0.29	Reverse Power Flow - max		11,369	9,817		2,040	1,726	Yes	LTC	No	Radial	644.34	0.00	12.13	0.00	7/1/2020	Nov-20	
Paynesville Tr	PAT_TR04	PAT312	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		5,428	5,057		5,428	5,057	Yes	LTC	No	Radial	3,029.59	12,000.00	3,029.59	12,000.00	1/1/2021	Aug-21	
Paynesville Tr	PAT_TR03	PAT313	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		4,830	4,580		4,170	3,420	Yes	LTC	Yes	Radial	16,036.72	2,000.00	16,036.72	2,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Paynesville Tr	PAT_TR03	PAT314	0.40	Thermal for Gen - min	0.49	Unintentional Islanding - max		4,830	4,580		701	701	Yes	LTC	No	Radial	16,036.72	2,000.00	0.00	0.00	1/1/2021	Aug-21	
Pine Bend	PBE_TR03	PBE061	0.50	Thermal for Gen - min	0.75	Reverse Power Flow - max		1,084	1,084		1,153	1,153	No	Regulator	No	Radial	1,093.49	0.00	1,093.49	0.00	7/1/2020	Nov-20	
Pine Island	PIL_TR01	PIL021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		940	940		940	940	No	Regulator	Yes	Radial	8,657.03	0.00	8,657.03	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Pine Island	PIL_TR02	PIL022	0.00	Unintentional Islanding - min	0.81	Unintentional Islanding - max		1,392	1,392		1,378	1,378	No	Regulator	No	Radial	46.39	0.00	46.39	0.00	7/1/2021	Nov-21	
Pipestone	PIP_TR01	PIP061	0.50	Thermal for Gen - min	1.47	Unintentional Islanding - max		3,746	2,290		2,121	1,530	Yes	Regulator	No	Radial	75.32	2,000.00	10.12	1,000.00	7/1/2021	Nov-21	
Pipestone	PIP_TR01	PIP062	0.50	Thermal for Gen - min	0.82	Unintentional Islanding - max		3,746	2,290		1,140	762	Yes	Regulator	No	Radial	75.32	2,000.00	65.20	1,000.00	7/1/2021	Nov-21	
Pipestone	PIP_TR03	PIP090	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		479	453		479	317	Yes	Regulator	Yes	Radial	5,506.90	0.00	5,506.90	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Parkers Lake	PKL_TR01	PKL061	0.73	Unintentional Islanding - min	0.73	Unintentional Islanding - max		11,916	9,785		2,902	2,571	Yes	LTC	No	Radial	2,057.50	0.00	0.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR01	PKL062	0.49	Unintentional Islanding - min	0.49	Unintentional Islanding - max		11,916	9,785		1,237	1,237	Yes	LTC	No	Radial	2,057.50	0.00	1,187.50	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR01	PKL063	0.32	Unintentional Islanding - min	0.32	Unintentional Islanding - max		11,916	9,785		922	906	Yes	LTC	No	Radial	2,057.50	0.00	0.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR01	PKL064	0.66	Unintentional Islanding - min	0.66	Unintentional Islanding - max		11,916	9,785		1,803	1,503	Yes	LTC	No	Radial	2,057.50	0.00	0.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR01	PKL065	1.28	Unintentional Islanding - min	1.28	Unintentional Islanding - max		11,916	9,785		1,612	1,105	Yes	LTC	No	Radial	2,057.50	0.00	870.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR01	PKL066	0.14	Unintentional Islanding - min	0.14	Unintentional Islanding - max		11,916	9,785		806	707	Yes	LTC	No	Radial	2,057.50	0.00	0.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR02	PKL071	0.90	Thermal for Gen - min	1.37	Unintentional Islanding - max		12,462	10,766		2,402	2,102	Yes	LTC	No	Radial	279.89	0.00	259.90	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR02	PKL072	0.80	Unintentional Islanding - min	0.80	Unintentional Islanding - max		12,462	10,766		1,265	1,118	Yes	LTC	No	Radial	279.89	0.00	0.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR02	PKL073	0.24	Unintentional Islanding - min	0.24	Unintentional Islanding - max		12,462	10,766		854	762	Yes	LTC	No	Radial	279.89	0.00	5.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR02	PKL074	0.58	Unintentional Islanding - min	0.58	Unintentional Islanding - max		12,462	10,766		2,231	2,894	Yes	LTC	No	Radial	279.89	0.00	0.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR02	PKL075	0.20	Unintentional Islanding - min	0.20	Unintentional Islanding - max		12,462	10,766		2,002	1,602	Yes	LTC	No	Radial	279.89	0.00	14.99	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR03	PKL081	0.31	Unintentional Islanding - min	0.31	Unintentional Islanding - max		10,539	8,927		1,414	1,217	Yes	LTC	No	Radial	717.53	0.00	0.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR03	PKL082	0.47	Unintentional Islanding - min	0.47	Unintentional Islanding - max		10,539	8,927		1,432	1,265	Yes	LTC	No	Radial	717.53	0.00	0.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR03	PKL083	1.00	Unintentional Islanding - min	1.00	Unintentional Islanding - max		10,539	8,927		1,965	1,628	Yes	LTC	No	Radial	717.53	0.00	11.39	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR03	PKL084	1.40	Thermal for Gen - min	1.72	Unintentional Islanding - max		10,539	8,927		2,657	2,617	Yes	LTC	No	Radial	717.53	0.00	655.00	0.00	7/1/2021	Nov-21	
Parkers Lake	PKL_TR03	PKL085	0.24	Unintentional Islanding - min	0.24	Unintentional Islanding - max		10,539	8,927		1,800	1,603	Yes	LTC	No	Radial	717.53	0.00	51.14	0.00	7/1/2021	Nov-21	
Plato	PLA_TR01	PLA022	0.04	Primary Over-Voltage - min	0.31	Primary Over-Voltage - max		2,693	2,617		510	412	Yes	Regulator	Yes	Radial	50.15	7,000.00	50.15	7,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Plato	PLA_TR01	PLA023	1.22	Unintentional Islanding - min	1.24	Unintentional Islanding - max		2,693	2,617		1,478	1,478	No	Regulator	No	Radial	50.15	7,000.00	0.00	0.00	1/1/2021	Aug-21	
Prior	PRR_TR01	PRR061	0.30	Thermal for Gen - min	1.72	Reverse Power Flow - max		4,563	4,305		2,135	1,862	Yes	LTC	No	Radial	266.42	29.02	246.42	29.02	7/1/2020	Nov-20	
Prior	PRR_TR01	PRR062	0.59	Reverse Power Flow - min	0.59	Reverse Power Flow - max		4,563	4,305		811	788	Yes	LTC	No	Radial	266.42	29.02	20.00	0.00	7/1/2020	Nov-20	
Prior	PRR_TR01	PRR063	0.90	Thermal for Gen - min	1.02	Reverse Power Flow - max		4,563	4,305		1,261	1,172	Yes	LTC	No	Radial	266.42	29.02	0.00	0.00	7/1/2020	Nov-20	
Ramsey	RAM_TR01	RAM061	0.40	Unintentional Islanding - min	0.40	Unintentional Islanding - max		4,046	4,046		1,540	1,404	Yes	Regulator	No	Radial	157.23	4.80	22.86	0.00	7/1/2021	Nov-21	
Ramsey	RAM_TR01	RAM062	0.01	Unintentional Islanding - min	0.07	Unintentional Islanding - max		4,046	4,046		1,414	1,345	Yes	Regulator	No	Radial	157.23	4.80	57.40	0.00	7/1/2021	Nov-21	
Ramsey	RAM_TR01	RAM063	0.06	Unintentional Islanding - min	0.44	Unintentional Islanding - max		4,046	4,046		2,012	1,565	Yes	Regulator	No	Radial	157.23	4.80	0.00	0.00	7/1/2021	Nov-21	
Ramsey	RAM_TR01	RAM064	0.31	Unintentional Islanding - min	0.31	Unintentional Islanding - max		4,046	4,046		2,354	1,838	Yes	Regulator	No	Radial	157.23	4.80	76.97	4.80	7/1/2021	Nov-21	
Ramsey	RAM_TR02	RAM071	0.86	Unintentional Islanding - min	0.86	Unintentional Islanding - max		10,073	8,460		2,879	2,220	Yes	Regulator	No	Radial	414.57	0.00	79.27	0.00	7/1/2021	Nov-21	
Ramsey	RAM_TR02	RAM072	0.08	Unintentional Islanding - min	0.45	Unintentional Islanding - max		10,073	8,460		1,712	1,432	Yes	Regulator	No	Radial	414.57	0.00	103.53	0.00	7/1/2021	Nov-21	
Ramsey	RAM_TR02	RAM073	0.16	Unintentional Islanding - min	0.16	Unintentional Islanding - max		10,073	8,460		2,408	1,970	Yes	Regulator	No	Radial	414.57	0.00	161.93	0.00	7/1/2021	Nov-21	
Ramsey	RAM_TR02	RAM077	0.02	Unintentional Islanding - min	0.61	Unintentional Islanding - max		10,073	8,460		2,693	2,581	Yes	Regulator	No	Radial	414.57	0.00	69.84	0.00	7/1/2021	Nov-21	
Rapidan	RAP_TR01	RAP081	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		474	474		474	474	No	Regulator	Yes	Radial	1,252.65	3,000.00	1,252.65	3,000.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Richmond	RCH_TR01	RCH061	0.00	Unintentional Islanding - min	0.47	Unintentional Islanding - max		625	625		625	625	No	Regulator	No	Radial	5,020.27	0.00	5,020.27	0.00	7/1/2021	Nov-21	
Red River	RED_TR02	RED091	0.10	Primary Over-Voltage - min	0.38	Breaker Relay Reduction of Reach - max		21,414	16,997		5,338	4,351	Yes	LTC	No	Radial	40.00	0.00	40.00	0.00	7/1/2020	Nov-20	
Red Wing	REW_TR01	REW021	0.03	Unintentional Islanding - min	0.57	Unintentional Islanding - max		4,103	3,473		632	632	Yes	Regulator	No	Radial	4,955.75	0.00	12.18	0.00	7/1/2021	Nov-21	
Red Wing	REW_TR01	REW022	0.46	Unintentional Islanding - min	0.46	Unintentional Islanding - max		4,103	3,473		1,100	762	Yes	Regulator	No	Radial	4,955.75	0.00	43.20	0.00	7/1/2021	Nov-21	
Red Wing	REW_TR01	REW023	0.80	Thermal for Gen - min	10.00	Primary Over-Voltage - max		4,103	3,473		1,687	1,500	Yes	Regulator	Yes	Radial	4,955.75	0.00	4,900.37	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Red Wing	REW_TR02	REW031	0.31	Unintentional Islanding - min	0.31	Unintentional Islanding - max		4,855	3,785		2,102	1,700	Yes	Regulator	No	Radial	115.70	0.00	64.07	0.00	7/1/2021	Nov-21	
Red Wing	REW_TR02	REW032	0.36	Unintentional Islanding - min	0.36	Unintentional Islanding - max		4,855	3,785		900	600	Yes	Regulator	No	Radial	115.70	0.00	4.35	0.00	7/1/2021	Nov-21	
Red Wing	REW_TR02	REW033	0.33	Unintentional Islanding - min	0.33	Unintentional Islanding - max		4,855	3,785		1,044	854	Yes	Regulator	No	Radial	115.70	0.00	47.28	0.00	7/1/2021	Nov-21	
Riverside	RIV_TR01	RIV061	0.90	Thermal for Gen - min	1.07	Reverse Power Flow - max		7,367	6,964		1,704	1,258	Yes	LTC	No	Radial	2,203.09	0.00	294.80	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR01	RIV062	0.90	Thermal for Gen - min	1.37	Reverse Power Flow - max		7,367	6,964		1,887	1,664	Yes	LTC	No	Radial	2,203.09	0.00	72.98	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR01	RIV063	0.50	Thermal for Gen - min	2.05	Reverse Power Flow - max		7,367	6,964		2,797	2,797	Yes	LTC	No	Radial	2,203.09	0.00	1,795.31	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR01	RIV064	0.80	Thermal for Gen - min	0.93	Reverse Power Flow - max		7,367	6,964		1,341	1,341	Yes	LTC	No	Radial	2,203.09	0.00	40.00	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR01	RIV065	1.67	Reverse Power Flow - min	1.67	Reverse Power Flow - max		7,367	6,964		537	537	Yes	LTC	No	Radial	2,203.09	0.00	0.00	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR01	RIV066	0.58	Reverse Power Flow - min	0.58	Reverse Power Flow - max		7,367	6,964		747	701	Yes	LTC	No	Radial	2,203.09	0.00	0.00	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR02	RIV071	0.33	Reverse Power Flow - min	0.33	Reverse Power Flow - max		7,424	7,355		741	724	Yes	LTC	No	Radial	466.40	0.00	0.00	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR02	RIV072	0.11	Reverse Power Flow - min	0.11	Reverse Power Flow - max		7,424	7,355		186	186	Yes	LTC	No	Radial	466.40	0.00	0.00	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR02	RIV073	0.90	Thermal for Gen - min	0.97	Reverse Power Flow - max		7,424	7,355		1,470	1,148	Yes	LTC	No	Radial	466.40	0.00	466.40	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR02	RIV074	0.10	Reverse Power Flow - min	0.10	Reverse Power Flow - max		7,424	7,355		123	123	Yes	LTC	No	Radial	466.40	0.00	0.00	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR02	RIV075	0.61	Reverse Power Flow - min	0.61	Reverse Power Flow - max		7,424	7,355		824	824	Yes	LTC	No	Radial	466.40	0.00	0.00	0.00	7/1/2020	Nov-20	
Riverside	RIV_TR02	RIV076	1.00	Thermal for Gen - min	1.53	Reverse Power Flow - max		7,424	7,355		2,139	2,024	Yes	LTC	No	Radial	466.40	0.00	0.00	0.00	7/1/2020	Nov-20	
Rogers Lake	RLK_TR01	RLK064	0.80	Primary Over-Voltage - min	1.29	Reverse Power Flow - max		11,235	10,521		1,703	1,513	Yes	LTC	No	Radial	748.05	0.00	20.88	0.00	7/1/2020	Nov-20	
Rogers Lake	RLK_TR01	RLK065	0.80	Thermal for Gen - min	1.41	Reverse Power Flow - max		11,235	10,521		2,209	2,209	Yes	LTC	No	Radial	748.05	0.00	464.93	0.00	7/1/2020	Nov-20	
Rogers Lake	RLK_TR01	RLK066	0.62	Reverse Power Flow - min	0.62	Reverse Power Flow - max		11,235	10,521		900	851	Yes	LTC	No	Radial	748.05	0.00	71.55	0.00	7/1/2020	Nov-20	
Rogers Lake	RLK_TR01	RLK068	1.50	Thermal for Gen - min	2.42	Reverse Power Flow - max		11,235	10,521		2,864	2,571	Yes	LTC	No	Radial	748.05	0.00	0.00	0.00	7/1/2020	Nov-20	
Rogers Lake	RLK_TR01	RLK069	0.70	Thermal for Gen - min	1.69	Reverse Power Flow - max		11,235	10,521		2,309	1,931	Yes	LTC	No	Radial	748.05	0.00	190.69	0.00	7/1/2020	Nov-20	
Rogers Lake	RLK_TR02	RLK071	0.50	Thermal for Gen - min	2.06	Reverse Power Flow - max		8,732	7,203		2,730	2,302	Yes	LTC	No	Radial	229.90	10.41	146.79	10.41	7/1/2020	Nov-20	
Rogers Lake	RLK_TR02	RLK072	0.90	Thermal for Gen - min	1.06	Reverse Power Flow - max		8,732	7,203		1,432	1,105	Yes	LTC	No	Radial	229.90	10.41	14.37	0.00	7/1/2020	Nov-20	
Rogers Lake	RLK_TR02	RLK073	1.00	Thermal for Gen - min	1.71	Reverse Power Flow - max		8,732	7,203		2,126	1,838	Yes	LTC	No	Radial	229.90	10.41	59.14	0.00	7/1/2020	Nov-20	
Rogers Lake	RLK_TR02	RLK079	0.60	Thermal for Gen - min	2.07	Reverse Power Flow - max		8,732	7,203		2,596	1,992	Yes	LTC	No	Radial	229.90	10.41	9.60	0.00	7/1/2020	Nov-20	
Rosemount	RMT_TR01	RMT311	0.20	Thermal for Gen - min	10.00	Primary Over-Voltage - max		5,515	5,515		1,639	1,639	No	LTC	Yes	Radial	10,000.00	0.00	10,000.00	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Renville	RNV_TR01	RNV021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		368	368		368	368	No	Regulator	Yes	Radial	1,035.21	3,000.00	1,035.21	3,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Rose Place	RPL_TR01	RPL061	0.90	Thermal for Gen - min	1.85	Reverse Power Flow - max		8,848	6,630		2,463	2,113	Yes	LTC	No	Radial	997.81	5.51	102.85	0.00	7/1/2020	Nov-20	
Rose Place	RPL_TR01	RPL062	0.87	Reverse Power Flow - min	0.87	Reverse Power Flow - max		8,848	6,630		1,094	597	Yes	LTC	No	Radial	997.81	5.51	0.00	0.00	7/1/2020	Nov-20	
Rose Place	RPL_TR01	RPL063	1.00	Thermal for Gen - min	2.30	Reverse Power Flow - max		8,848	6,630		2,988	2,534	Yes	LTC	No	Radial	997.81	5.51	85.88	5.51	7/1/2020	Nov-20	
Rose Place	RPL_TR01	RPL064	0.90	Thermal for Gen - min	2.21	Reverse Power Flow - max		8,848	6,630		2,849	2,533	Yes	LTC	No	Radial	997.81	5.51	809.08	0.00	7/1/2020	Nov-20	
Rose Place	RPL_TR02	RPL071	0.90	Thermal for Gen - min	2.15	Reverse Power Flow - max		10,288	7,612		2,684	2,610	Yes	LTC	No	Radial	144.00	7.62	42.83	0.00	7/1/2020	Nov-20	
Rose Place	RPL_TR02	RPL072	0.90	Thermal for Gen - min	1.02	Reverse Power Flow - max		10,288	7,612		1,500	1,253	Yes	LTC	No	Radial	144.00	7.62	0.00	0.00	7/1/2020	Nov-20	
Rose Place	RPL_TR02	RPL073	0.90	Thermal for Gen - min	1.66	Reverse Power Flow - max		10,288	7,612		2,113	1,814	Yes	LTC	No	Radial	144.00	7.62	0.00	0.00	7/1/2020	Nov-20	
Rose Place	RPL_TR02	RPL074	0.90	Thermal for Gen - min	2.23	Reverse Power Flow - max		10,288	7,612		2,893	2,621	Yes	LTC	No	Radial	144.00	7.62	101.17	7.62	7/1/2020	Nov-20	
Rose Place	RPL_TR02	RPL075	0.40	Reverse Power Flow - min	0.40	Reverse Power Flow - max		10,288	7,612		497	423	Yes	LTC	No	Radial	144.00	7.62	0.00	0.00	7/1/2020	Nov-20	
Red Rock	RRK_TR01	RRK061	0.66	Reverse Power Flow - min	0.66	Reverse Power Flow - max		13,124	12,090		1,099	941	Yes	Regulator	No	Radial	3,108.49	12.62	0.00	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Red Rock	RRK_TR01	RRK062	1.50	Thermal for Gen - min	4.30	Reverse Power Flow - max		13,124	12,090		5,412	5,412	Yes	Regulator	No	Radial	3,108.49	12.62	0.00	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Red Rock	RRK_TR01	RRK063	0.90	Thermal for Gen - min	1.85	Breaker Relay Reduction of Reach - max		13,124	12,090		3,081	2,921	Yes	Regulator	No	Radial	3,108.49	12.62	8.15	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Red Rock	RRK_TR01	RRK064	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		13,124	12,090		2,302	2,302	Yes	Regulator	Yes	Radial	3,108.49	12.62	3,100.34	12.62	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades. Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Red Rock	RRK_TR02	RRK071	1.50	Thermal for Gen - min	5.21	Reverse Power Flow - max		8,805	8,805		6,628	6,628	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Red Rock	RRK_TR02	RRK072	0.65	Reverse Power Flow - min	0.65	Reverse Power Flow - max		8,805	8,805		1,221	1,020	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Red Rock	RRK_TR03	RRK081	4.41	Reverse Power Flow - min	4.41	Reverse Power Flow - max		9,177	8,891		5,567	5,567	Yes	Regulator	No	Radial	60.33	23.91	0.00	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Red Rock	RRK_TR03	RRK082	0.40	Primary Over-Voltage - min	0.56	Reverse Power Flow - max		9,177	8,891		1,063	985	Yes	Regulator	No	Radial	60.33	23.91	60.33	23.91	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Red Rock	RRK_TR03	RRK083	0.90	Thermal for Gen - min	1.83	Reverse Power Flow - max		9,177	8,891		2,485	2,302	Yes	Regulator	No	Radial	60.33	23.91	0.00	0.00	7/1/2020	Nov-20	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
Rich Spring	RSP_TR01	RSP061	0.00	Unintentional Islanding - min	0.89	Unintentional Islanding - max		1,059	1,059		1,059	1,059	No	Regulator	No	Radial	986.00	0.00	986.00	0.00	7/1/2021	Nov-21	
Rich Valley	RVA_TR01	RVA061	0.80	Primary Over-Voltage - min	2.73	Unintentional Islanding - max		7,695	7,244		2,650	2,650	No	LTC	No	Radial	124.60	0.00	64.60	0.00	1/1/2021	Aug-21	
Rich Valley	RVA_TR01	RVA062	0.20	Primary Over-Voltage - min	2.06	Unintentional Islanding - max		7,695	7,244		2,158	2,158	No	LTC	No	Radial	124.60	0.00	60.00	0.00	1/1/2021	Aug-21	
Rich Valley	RVA_TR01	RVA063	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		7,695	7,244		NA	NA	No	LTC	No	Radial	124.60	0.00	0.00	0.00	7/1/2020	Nov-20	
Riverwood	RWD_TR01	RWD061	0.50	Thermal for Gen - min	1.21	Unintentional Islanding - max		5,708	4,927		1,533	1,842	Yes	LTC	No	Radial	200.98	0.00	0.00	0.00	1/1/2021	Aug-21	
Riverwood	RWD_TR01	RWD062	0.90	Thermal for Gen - min	1.51	Unintentional Islanding - max		5,708	4,927		2,035	2,035	Yes	LTC	No	Radial	200.98	0.00	34.58	0.00	1/1/2021	Aug-21	
Riverwood	RWD_TR01	RWD063	1.40	Thermal for Gen - min	1.47	Unintentional Islanding - max		5,708	4,927		2,013	1,764	Yes	LTC	No	Radial	200.98	0.00	166.41	0.00	1/1/2021	Aug-21	
Riverwood	RWD_TR02	RWD081	0.13	Unintentional Islanding - min	1.22	Unintentional Islanding - max		3,276	3,112		1,591	1,502	Yes	LTC	No	Radial	35.10	23.99	5.10	0.00	1/1/2021	Aug-21	
Riverwood	RWD_TR02	RWD082	0.50	Thermal for Gen - min	1.33	Unintentional Islanding - max		3,276	3,112		1,790	1,591	Yes	LTC	No	Radial	35.10	23.99	30.00	23.99	1/1/2021	Aug-21	
Sauk River	SAK_TR01	SAK311	0.00	Thermal for Gen - min	2.60	Primary Over-Voltage - max		5,240	5,240		3,497	3,497	Yes	LTC	Yes	Radial	13,970.00	0.00	4,750.00	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Sauk River	SAK_TR01	SAK312	0.00	Unintentional Islanding - min	2.74	Unintentional Islanding - max		5,240	5,240		3,878	3,729	Yes	LTC	No	Radial	13,970.00	0.00	9,220.00	0.00	7/1/2021	Nov-21	
Sauk River	SAK_TR02	SAK321	0.00	Unintentional Islanding - min	2.05	Unintentional Islanding - max		2,707	2,707		2,707	2,707	Yes	Regulator	No	Radial	12.00	0.00	12.00	0.00	1/1/2021	Aug-21	
Savage	SAV_TR01	SAV063	0.29	Unintentional Islanding - min	2.13	Unintentional Islanding - max		4,027	3,365		2,164	2,164	Yes	Regulator	No	Radial	141.57	0.00	89.39	0.00	1/1/2021	Aug-21	
Savage	SAV_TR01	SAV067	0.80	Thermal for Gen - min	3.43	Unintentional Islanding - max		4,027	3,365		3,507	3,495	Yes	Regulator	No	Radial	141.57	0.00	0.00	0.00	1/1/2021	Aug-21	
Savage	SAV_TR01	SAV069	0.00	Unintentional Islanding - min	0.27	Unintentional Islanding - max		4,027	3,365		280	244	Yes	Regulator	No	Radial	141.57	0.00	52.18	0.00	1/1/2021	Aug-21	
Savage	SAV_TR02	SAV071	1.00	Thermal for Gen - min	1.76	Unintentional Islanding - max		2,850	2,486		1,781	1,781	Yes	LTC	No	Radial	29.28	0.00	3.19	0.00	1/1/2021	Aug-21	
Savage	SAV_TR02	SAV072	0.90	Thermal for Gen - min	1.00	Unintentional Islanding - max		2,850	2,486		1,016	964	Yes	LTC	No	Radial	29.28	0.00	0.00	0.00	1/1/2021	Aug-21	
Savage	SAV_TR02	SAV073	1.13	Unintentional Islanding - min	1.13	Unintentional Islanding - max		2,850	2,486		1,144	932	Yes	LTC	No	Radial	29.28	0.00	26.09	0.00	1/1/2021	Aug-21	
Scandia	SCA_TR01	SCA021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		2,259	2,259		2,259	2,259	No	Regulator	No	Radial	15,117.28	7.62	15,117.28	7.62	7/1/2020	Nov-20	
Sacred Heart	SCH_TR01	SCH001	0.10	Primary Over-Voltage - min	0.13	Reverse Power Flow - max		408	408		150	150	No	Regulator	No	Radial	2,026.30	0.00	0.00	0.00	7/1/2020	Nov-20	
Sacred Heart	SCH_TR01	SCH211	0.00	Breaker Relay Reduction of Reach - min	5.27	Breaker Relay Reduction of Reach - max		408	408		258	258	No	Regulator	Yes	Radial	2,026.30	0.00	2,026.30	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Saint Cloud	SCL_TR01	SCL311	0.40	Primary Over-Voltage - min	2.82	Reverse Power Flow - max		16,286	11,858		3,569	2,542	Yes	LTC	No	Radial	879.29	0.00	4.64	0.00	7/1/2020	Nov-20	
Saint Cloud	SCL_TR01	SCL312	0.10	Primary Over-Voltage - min	0.55	Breaker Relay Reduction of Reach - max		16,286	11,858		6,687	4,726	Yes	LTC	No	Radial	879.29	0.00	614.39	0.00	7/1/2020	Nov-20	
Saint Cloud	SCL_TR01	SCL313	0.10	Thermal for Gen - min	1.12	Breaker Relay Reduction of Reach - max		16,286	11,858		8,219	6,583	Yes	LTC	No	Radial	879.29	0.00	260.27	0.00	7/1/2020	Nov-20	

PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Saint Cloud	SCL_TR02	SCL322	0.10	Primary Over-Voltage - min	10.00	Primary Over-Voltage - max		6,789	6,789		5,022	5,022	No	LTC	Yes	Radial	35,004.69	4,248.00	35,004.69	4,248.00	7/1/2021	Nov-21	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades. Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Saint Cloud	SCL_TR02	SCL323	0.10	Primary Over-Voltage - min	1.54	Reverse Power Flow - max		6,789	6,789		5,842	5,283	Yes	LTC	No	Radial	35,004.69	4,248.00	0.00	0.00	7/1/2020	Nov-20	
Salida Crossing	SDX_TR01	SDX061	0.93	Reverse Power Flow - min	0.93	Reverse Power Flow - max		1,265	1,265		1,265	1,265	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Salida Crossing	SDX_TR02	SDX311	0.00	Unintentional Islanding - min	1.02	Unintentional Islanding - max		4,689	4,689		1,322	1,322	Yes	LTC	No	Radial	8,065.45	150.00	8,050.00	0.00	1/1/2021	Aug-21	
Salida Crossing	SDX_TR02	SDX312	0.30	Thermal for Gen - min	1.06	Reverse Power Flow - max		4,689	4,689		1,726	1,513	Yes	LTC	No	Radial	8,065.45	150.00	15.45	150.00	7/1/2020	Nov-20	
Salida Crossing	SDX_TR02	SDX313	2.06	Reverse Power Flow - min	2.06	Reverse Power Flow - max		4,689	4,689		0	0	Yes	LTC	No	Radial	8,065.45	150.00	0.00	0.00	7/1/2020	Nov-20	
Sedan	SED_TR01	SED061	0.02	Unintentional Islanding - min	0.02	Unintentional Islanding - max		52	52		52	52	No	Regulator	No	Radial	13.60	0.00	13.60	0.00	7/1/2021	Nov-21	
Shepard	SHP_TR01	SHP061	0.90	Thermal for Gen - min	0.91	Unintentional Islanding - max		3,354	2,927		1,334	922	Yes	LTC	No	Radial	108.95	0.00	43.01	0.00	7/1/2021	Nov-21	
Shepard	SHP_TR01	SHP062	0.50	Thermal for Gen - min	2.15	Unintentional Islanding - max		3,354	2,927		2,844	2,040	Yes	LTC	No	Radial	108.95	0.00	65.94	0.00	7/1/2021	Nov-21	
Shepard	SHP_TR01	SHP063	0.84	Unintentional Islanding - min	0.84	Unintentional Islanding - max		3,354	2,927		1,221	1,140	Yes	LTC	No	Radial	108.95	0.00	0.00	0.00	7/1/2021	Nov-21	
Shepard	SHP_TR02	SHP071	0.90	Thermal for Gen - min	1.56	Unintentional Islanding - max		3,354	2,927		2,040	1,703	Yes	LTC	No	Radial	60.87	0.00	12.96	0.00	7/1/2021	Nov-21	
Shepard	SHP_TR02	SHP072	0.30	Thermal for Gen - min	0.77	Unintentional Islanding - max		3,354	2,927		1,105	1,020	Yes	LTC	No	Radial	60.87	0.00	47.91	0.00	7/1/2021	Nov-21	
Sibley Park	SIP_TR01	SIP061	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		11,075	8,930		2,528	2,049	Yes	LTC	No	Radial	31.56	0.00	31.56	0.00	7/1/2021	Nov-21	
Sibley Park	SIP_TR01	SIP062	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		11,075	8,930		2,024	1,972	Yes	LTC	No	Radial	31.56	0.00	0.00	0.00	7/1/2021	Nov-21	
Sibley Park	SIP_TR01	SIP063	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		11,075	8,930		1,283	1,225	Yes	LTC	No	Radial	31.56	0.00	0.00	0.00	7/1/2021	Nov-21	
Sibley Park	SIP_TR02	SIP071	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		6,653	5,168		2,637	0	Yes	LTC	No	Radial	54.22	0.00	10.00	0.00	7/1/2021	Nov-21	
Sibley Park	SIP_TR02	SIP072	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		6,653	5,168		2,215	1,692	Yes	LTC	No	Radial	54.22	0.00	17.01	0.00	7/1/2021	Nov-21	
Sibley Park	SIP_TR02	SIP073	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		6,653	5,168		1,884	1,631	Yes	LTC	No	Radial	54.22	0.00	27.21	0.00	7/1/2021	Nov-21	
Saint John's	SJO_TR01	SJO001	0.13	Unintentional Islanding - min	0.13	Unintentional Islanding - max		505	505		505	505	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
Saint Louis Par	SLP_TR04	SLP071	0.60	Thermal for Gen - min	1.61	Reverse Power Flow - max		18,761	13,419		2,171	1,923	Yes	LTC	No	Radial	419.55	4.56	50.93	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR04	SLP072	0.20	Thermal for Gen - min	1.89	Reverse Power Flow - max		18,761	13,419		2,489	2,206	Yes	LTC	No	Radial	419.55	4.56	47.71	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR04	SLP073	0.30	Thermal for Gen - min	1.71	Reverse Power Flow - max		18,761	13,419		2,391	2,276	Yes	LTC	No	Radial	419.55	4.56	62.87	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR04	SLP074	0.30	Thermal for Gen - min	1.06	Breaker Relay Reduction of Reach - max		18,761	13,419		2,869	2,581	Yes	LTC	No	Radial	419.55	4.56	158.20	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR04	SLP075	0.50	Thermal for Gen - min	1.66	Reverse Power Flow - max		18,761	13,419		2,231	1,950	Yes	LTC	No	Radial	419.55	4.56	72.55	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR04	SLP076	0.90	Thermal for Gen - min	1.86	Reverse Power Flow - max		18,761	13,419		2,499	2,090	Yes	LTC	No	Radial	419.55	4.56	19.46	4.56	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR04	SLP077	0.90	Thermal for Gen - min	1.23	Reverse Power Flow - max		18,761	13,419		1,947	1,639	Yes	LTC	No	Radial	419.55	4.56	7.83	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR05	SLP081	0.90	Thermal for Gen - min	1.37	Reverse Power Flow - max		15,620	11,823		2,058	1,921	Yes	LTC	No	Radial	2,938.23	11.39	22.17	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR05	SLP082	0.90	Thermal for Gen - min	2.02	Unintentional Islanding - max		15,620	11,823		3,047	2,055	Yes	LTC	No	Radial	2,938.23	11.39	115.12	0.00	7/1/2021	Nov-21	
Saint Louis Par	SLP_TR05	SLP083	0.90	Thermal for Gen - min	1.58	Reverse Power Flow - max		15,620	11,823		2,210	1,811	Yes	LTC	No	Radial	2,938.23	11.39	41.02	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR05	SLP084	0.90	Thermal for Gen - min	1.36	Reverse Power Flow - max		15,620	11,823		2,034	1,483	Yes	LTC	No	Radial	2,938.23	11.39	2,659.61	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR05	SLP085	1.00	Thermal for Gen - min	1.34	Reverse Power Flow - max		15,620	11,823		2,021	1,537	Yes	LTC	No	Radial	2,938.23	11.39	71.47	11.39	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR05	SLP086	1.00	Thermal for Gen - min	2.02	Reverse Power Flow - max		15,620	11,823		2,758	2,279	Yes	LTC	No	Radial	2,938.23	11.39	5.00	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR05	SLP087	0.90	Thermal for Gen - min	1.10	Reverse Power Flow - max		15,620	11,823		1,494	1,278	Yes	LTC	No	Radial	2,938.23	11.39	23.84	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR06	SLP091	0.90	Reverse Power Flow - min	0.90	Reverse Power Flow - max		14,536	12,684		1,343	1,151	Yes	LTC	No	Radial	912.28	139.58	0.00	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR06	SLP092	0.90	Thermal for Gen - min	1.30	Reverse Power Flow - max		14,536	12,684		2,177	1,874	Yes	LTC	No	Radial	912.28	139.58	461.62	133.20	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR06	SLP093	0.40	Primary Over-Voltage - min	2.17	Reverse Power Flow - max		14,536	12,684		3,199	2,597	Yes	LTC	No	Radial	912.28	139.58	40.00	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR06	SLP094	0.90	Thermal for Gen - min	1.53	Reverse Power Flow - max		14,536	12,684		2,031	1,738	Yes	LTC	No	Radial	912.28	139.58	110.13	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR06	SLP095	0.90	Thermal for Gen - min	1.01	Reverse Power Flow - max		14,536	12,684		1,743	1,617	Yes	LTC	No	Radial	912.28	139.58	11.49	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR06	SLP096	0.90	Thermal for Gen - min	2.10	Reverse Power Flow - max		14,536	12,684		2,618	1,987	Yes	LTC	No	Radial	912.28	139.58	268.02	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR06	SLP097	0.50	Thermal for Gen - min	1.27	Reverse Power Flow - max		14,536	12,684		1,934	2,056	Yes	LTC	No	Radial	912.28	139.58	21.03	6.38	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR02	SLP321	0.70	Primary Over-Voltage - min	2.21	Breaker Relay Reduction of Reach - max		11,613	10,369		4,367	3,562	Yes	LTC	No	Radial	137.91	0.00	71.31	0.00	7/1/2020	Nov-20	
Saint Louis Par	SLP_TR02	SLP322	0.50	Primary Over-Voltage - min	1.62	Breaker Relay Reduction of Reach - max		11,613	10,369		6,217	4,743	Yes	LTC	No	Radial	137.91	0.00	66.60	0.00	7/1/2020	Nov-20	
Slayton West	SLW_TR01	SLW061	0.18	Reverse Power Flow - min	0.18	Reverse Power Flow - max		1,447	1,447		914	668	Yes	Regulator	Yes	Radial	1,013.20	0.00	1,000.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Slayton West	SLW_TR01	SLW062	0.60	Reverse Power Flow - min	0.60	Reverse Power Flow - max		1,447	1,447		927	732	Yes	Regulator	No	Radial	1,013.20	0.00	13.20	0.00	7/1/2020	Nov-20	
Summit Ave	SMT_TR01	SMT061	0.70	Thermal for Gen - min	1.94	Reverse Power Flow - max		11,602	11,602		2,637	2,543	Yes	LTC	No	Radial	3,056.66	3,000.00	6.00	0.00	7/1/2020	Nov-20	
Summit Ave	SMT_TR01	SMT062	0.10	Primary Over-Voltage - min	0.50	Breaker Relay Reduction of Reach - max		11,602	11,602		2,469	2,243	Yes	LTC	No	Radial	3,056.66	3,000.00	0.00	0.00	7/1/2020	Nov-20	
Summit Ave	SMT_TR01	SMT063	0.50	Thermal for Gen - min	0.65	Reverse Power Flow - max		11,602	11,602		1,157	1,123	Yes	LTC	No	Radial	3,056.66	3,000.00	0.00	0.00	7/1/2020	Nov-20	
Summit Ave	SMT_TR01	SMT071	1.50	Thermal for Gen - min	1.69	Reverse Power Flow - max		11,602	11,602		1,079	1,047	Yes	LTC	No	Radial	3,056.66	3,000.00	0.00	0.00	7/1/2020	Nov-20	
Summit Ave	SMT_TR01	SMT072	0.30	Thermal for Gen - min	0.74	Breaker Relay Reduction of Reach - max		11,602	11,602		2,640	2,640	Yes	LTC	Yes	Radial	3,056.66	3,000.00	3,050.66	3,000.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Summit Ave	SMT_TR02	SMT081	0.90	Thermal for Gen - min	1.66	Reverse Power Flow - max		7,798	6,986		3,020	2,616	Yes	LTC	No	Radial	6,154.84	1,000.00	0.00	0.00	7/1/2020	Nov-20	
Summit Ave	SMT_TR02	SMT082	0.00	Unintentional Islanding - min	0.00	Unintentional Islanding - max		7,798	6,986		1,107	1,077	Yes	LTC	No	Radial	6,154.84	1,000.00	5,009.48	1,000.00	7/1/2021	Nov-21	
Summit Ave	SMT_TR02	SMT091	0.40	Thermal for Gen - min	1.62	Reverse Power Flow - max		7,798	6,986		2,576	2,272	Yes	LTC	No	Radial	6,154.84	1,000.00	105.36	0.00	7/1/2020	Nov-20	
Summit Ave	SMT_TR02	SMT092	0.00	Reverse Power Flow - min	0.00	Reverse Power Flow - max		7,798	6,986		483	483	Yes	LTC	Yes	Radial	6,154.84	1,000.00	1,040.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
South Haven	SOH_TR01	SOH001	0.07	Unintentional Islanding - min	0.07	Unintentional Islanding - max		105	105		105	105	No	Regulator	No	Radial	7.62	0.00	7.62	0.00	7/1/2021	Nov-21	
Southtown	SOU_TR01	SOU061	0.90	Thermal for Gen - min	1.34	Reverse Power Flow - max		12,369	9,916		1,851	1,402	Yes	LTC	No	Radial	402.46	35.23	56.77	4.08	7/1/2020	Nov-20	
Southtown	SOU_TR01	SOU063	0.90	Thermal for Gen - min	1.44	Unintentional Islanding - max		12,369	9,916		2,544	2,223	Yes	LTC	No	Radial	402.46	35.23	108.22	11.63	7/1/2021	Nov-21	
Southtown	SOU_TR01	SOU064	0.20	Thermal for Gen - min	1.91	Reverse Power Flow - max		12,369	9,916		2,635	2,006	Yes	LTC	No	Radial	402.46	35.23	140.31	11.90	7/1/2020	Nov-20	
Southtown	SOU_TR01	SOU065	1.50	Thermal for Gen - min	2.24	Reverse Power Flow - max		12,369	9,916		2,862	2,706	Yes	LTC	No	Radial	402.46	35.23	22.22	7.62	7/1/2020	Nov-20	
Southtown	SOU_TR01	SOU066	0.82	Reverse Power Flow - min	0.82	Reverse Power Flow - max		12,369	9,916		1,089	777	Yes	LTC	No	Radial	402.46	35.23	2.90	0.00	7/1/2020	Nov-20	
Southtown	SOU_TR01	SOU069	0.86	Reverse Power Flow - min	0.86	Reverse Power Flow - max		12,369	9,916		1,260	1,024	Yes	LTC	No	Radial	402.46	35.23	72.04	0.00	7/1/2020	Nov-20	
Southtown	SOU_TR02	SOU072	0.90	Thermal for Gen - min	1.77	Reverse Power Flow - max		12,680	10,752		2,586	1,957	Yes	LTC	No	Radial	604.36	35.36	149.20	6.00	7/1/2020	Nov-20	
Southtown	SOU_TR02	SOU073	0.66	Reverse Power Flow - min	0.66	Reverse Power Flow - max		12,680	10,752		1,036	877	Yes	LTC	No	Radial	604.36	35.36	53.95	0.00	7/1/2020	Nov-20	
Southtown	SOU_TR02	SOU075	0.90	Thermal for Gen - min	1.76	Unintentional Islanding - max		12,680	10,752		2,391	2,054	Yes	LTC	No	Radial	604.36	35.36	122.29	19.37	7/1/2021	Nov-21	
Southtown	SOU_TR02	SOU076	0.66	Reverse Power Flow - min	0.66	Reverse Power Flow - max		12,680	10,752		1,099	1,099	Yes	LTC	No	Radial	604.36	35.36	23.28	0.00	7/1/2020	Nov-20	
Southtown	SOU_TR02	SOU077	1.00	Thermal for Gen - min	1.59	Reverse Power Flow - max		12,680	10,752		2,179	1,717	Yes	LTC	No	Radial	604.36	35.36	87.15	9.99	7/1/2020	Nov-20	
Southtown	SOU_TR02	SOU078	0.50	Thermal for Gen - min	0.77	Reverse Power Flow - max		12,680	10,752		1,175	1,064	Yes	LTC	No	Radial	604.36	35.36	4.72	0.00	7/1/2020	Nov-20	
Southtown	SOU_TR02	SOU079	1.00	Thermal for Gen - min	1.25	Reverse Power Flow - max		12,680	10,752		1,900	1,705	Yes	LTC	No	Radial	604.36	35.36	163.77	0.00	7/1/2020	Nov-20	
Southtown	SOU_TR03	SOU081	0.90	Thermal for Gen - min	0.91	Reverse Power Flow - max		15,704	11,960		1,216	961	Yes	LTC	No	Radial	576.74	213.90	96.49	3.22	7/1/2020	Nov-20	
Southtown	SOU_TR03	SOU082	0.90	Thermal for Gen - min	2.05	Unintentional Islanding - max		15,704	11,960		2,854	2,333	Yes	LTC	No	Radial	576.74	213.90	117.77	0.00	7/1/2021	Nov-21	
Southtown	SOU_TR03	SOU083	0.50	Thermal for Gen - min	0.90	Reverse Power Flow - max		15,704	11,960		1,427	1,329	Yes	LTC	No	Radial	576.74	213.90	94.37	7.23	7/1/2020	Nov-20	
Southtown	SOU_TR03	SOU084	0.43	Reverse Power Flow - min	0.43	Reverse Power Flow - max		15,704	11,960		783	692	Yes	LTC	No	Radial	576.74	213.90	20.47	2.88	7/1/2020	Nov-20	
Southtown	SOU_TR03	SOU085	0.90	Thermal for Gen - min	2.06	Reverse Power Flow - max		15,704	11,960		3,248	2,658	Yes	LTC	No	Radial	576.74	213.90	0.00	0.00	7/1/2020	Nov-20	
Southtown	SOU_TR03	SOU086	0.90	Thermal for Gen - min	0.91	Reverse Power Flow - max		15,704	11,960		1,432	1,217	Yes	LTC	No	Radial	576.74	213.90	132.79	157.37	7/1/2020	Nov-20	
Southtown	SOU_TR03	SOU087	0.70	Reverse Power Flow - min	0.70	Reverse Power Flow - max		15,704	11,960		1,204	906	Yes	LTC	No	Radial	576.74	213.90	114.85	0.00	7/1/2020	Nov-20	
Southtown	SOU_TR03	SOU088	0.20	Thermal for Gen - min	0.61	Reverse Power Flow - max		15,704	11,960		847	773	Yes	LTC	No	Radial	576.74	213.90	0.00	43.20	7/1/2020	Nov-20	
South Ridge	SRD_TR01	SRD211	0.10	Unintentional Islanding - min	0.85	Unintentional Islanding - max		1,073	1,073		1,073	1,073	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	1/1/2021	Aug-21	
Saint Joseph	STO_TR01	STO001	0.47	Unintentional Islanding - min	0.47	Unintentional Islanding - max		1,130	1,130		592	592	No	Regulator	No	Radial	56.52	0.00	0.00	0.00	7/1/2021	Nov-21	
Saint Joseph	STO_TR01	STO002	0.20	Primary Over-Voltage - min	0.33	Unintentional Islanding - max		1,130	1,130		538	538	No	Regulator	No	Radial	56.52	0.00	56.52	0.00	7/1/2021	Nov-21	
Stewart	STW_TR01	STW021	0.02	Reverse Power Flow - min	0.02	Reverse Power Flow - max		358	294		358	294	Yes	Regulator	Yes	Radial	2,000.00	0.00	2,000.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Stockyards	STY_TR01	STY061	0.90	Thermal for Gen - min	1.98	Unintentional Islanding - max		10,914	8,570		2,900	2,220	Yes	LTC	No	Radial	1,219.97	0.00	34.73	0.00	7/1/2021	Nov-21	
Stockyards	STY_TR01	STY062	0.90	Thermal for Gen - min	1.50	Unintentional Islanding - max		10,914	8,570		2,309	2,000	Yes	LTC	No	Radial	1,219.97	0.00	16.43	0.00	7/1/2021	Nov-21	
Stockyards	STY_TR01	STY063	0.40	Primary Over-Voltage - min	0.60	Primary Over-Voltage - max		10,914	8,570		2,550	2,377	Yes	LTC	No	Radial	1,219.97	0.00	1,002.90	0.00	7/1/2020	Nov-20	
Stockyards	STY_TR01	STY065	0.50	Thermal for Gen - min	0.91	Unintentional Islanding - max		10,914	8,570		1,599	1,516	Yes	LTC	No	Radial	1,219.97	0.00	165.91	0.00	7/1/2021	Nov-21	
Stockyards	STY_TR02	STY071	0.90	Thermal for Gen - min	3.96	Unintentional Islanding - max		10,906	8,820		5,122	4,119	Yes	LTC	No	Radial	417.26	0.00	36.11	0.00	7/1/2021	Nov-21	
Stockyards	STY_TR02	STY072	0.07	Unintentional Islanding - min	1.25	Unintentional Islanding - max		10,906	8,820		1,924	1,726	Yes	LTC	No	Radial	417.26	0.00	347.94	0.00	7/1/2021	Nov-21	
Stockyards	STY_TR02	STY073	0.19	Unintentional Islanding - min	1.33	Unintentional Islanding - max		10,906	8,820		2,040	1,676	Yes	LTC	No	Radial	417.26	0.00	21.08	0.00	7/1/2021	Nov-21	
Stockyards	STY_TR02	STY075	0.90	Thermal for Gen - min	1.00	Unintentional Islanding - max		10,906	8,820		1,603	1,304	Yes	LTC	No	Radial	417.26	0.00	12.12	0.00	7/1/2021	Nov-21	
Swan Lake	SWN_TR01	SWN021	0.26	Unintentional Islanding - min	0.26	Unintentional Islanding - max		1,042	1,042		446	446	No	Regulator	No	Radial	7,069.98	0.00	69.98	0.00	1/1/2021	Aug-21	
Swan Lake	SWN_TR01	SWN022	0.00	Thermal for Gen - min	0.58	Thermal for Gen - max		1,042	1,042		703	703	No	Regulator	Yes	Radial	7,069.98	0.00	7,000.00	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Terminal	TER_TR01	TER061	0.90	Thermal for Gen - min	1.87	Reverse Power Flow - max		17,255	15,633		2,388	2,123	Yes	LTC	No	Radial	475.64	0.00	340.93	0.00	7/1/2020	Nov-20	
Terminal	TER_TR01	TER062	0.90	Thermal for Gen - min	1.76	Reverse Power Flow - max		17,255	15,633		2,631	2,256	Yes	LTC	No	Radial	475.64	0.00	65.65	0.00	7/1/2020	Nov-20	
Terminal	TER_TR01	TER063	0.90	Thermal for Gen - min	1.98	Reverse Power Flow - max		17,255	15,633		2,765	2,549	Yes	LTC	No	Radial	475.64	0.00	69.06	0.00	7/1/2020	Nov-20	
Terminal	TER_TR01	TER064	0.90	Thermal for Gen - min	1.01	Reverse Power Flow - max		17,255	15,633		1,276	1,276	Yes	LTC	No	Radial	475.64	0.00	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR01	TER065	0.40	Thermal for Gen - min	1.11	Reverse Power Flow - max		17,255	15,633		1,530	1,430	Yes	LTC	No	Radial	475.64	0.00	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR01	TER066	0.90	Thermal for Gen - min	2.06	Reverse Power Flow - max		17,255	15,633		2,670	2,670	Yes	LTC	No	Radial	475.64	0.00	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR02	TER071	0.90	Thermal for Gen - min	1.40	Reverse Power Flow - max		7,609	6,802		2,134	1,836	Yes	LTC	No	Radial	1,062.65	1,005.96	96.66	6.96	7/1/2020	Nov-20	
Terminal	TER_TR02	TER072	0.68	Reverse Power Flow - min	0.68	Reverse Power Flow - max		7,609	6,802		838	761	Yes	LTC	No	Radial	1,062.65	1,005.96	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR02	TER073	0.90	Thermal for Gen - min	0.93	Reverse Power Flow - max		7,609	6,802		1,204	1,000	Yes	LTC	No	Radial	1,062.65	1,005.96	125.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR02	TER074	0.13	Reverse Power Flow - min	0.13	Reverse Power Flow - max		7,609	6,802		169	169	Yes	LTC	No	Radial	1,062.65	1,005.96	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR02	TER075	0.90	Thermal for Gen - min	1.18	Reverse Power Flow - max		7,609	6,802		1,724	1,609	Yes	LTC	No	Radial	1,062.65	1,005.96	840.99	999.00	7/1/2020	Nov-20	
Terminal	TER_TR02	TER076	0.10	Thermal for Gen - min	0.14	Reverse Power Flow - max		7,609	6,802		510	490	Yes	LTC	No	Radial	1,062.65	1,005.96	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR03	TER081	0.90	Thermal for Gen - min	1.77	Reverse Power Flow - max		10,380	8,170		2,481	2,101	Yes	LTC	No	Radial	887.08	133.99	568.06	8.99	7/1/2020	Nov-20	
Terminal	TER_TR03	TER082	0.90	Thermal for Gen - min	1.60	Reverse Power Flow - max		10,380	8,170		2,230	1,971	Yes	LTC	No	Radial	887.08	133.99	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR03	TER083	0.50	Thermal for Gen - min	2.00	Reverse Power Flow - max		10,380	8,170		947	878	Yes	LTC	No	Radial	887.08	133.99	29.02	125.00	7/1/2020	Nov-20	
Terminal	TER_TR03	TER084	0.00	Reverse Power Flow - min	0.00	Reverse Power Flow - max		10,380	8,170		121	121	Yes	LTC	No	Radial	887.08	133.99	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR03	TER085	0.90	Thermal for Gen - min	1.04	Reverse Power Flow - max		10,380	8,170		1,358	1,356	Yes	LTC	No	Radial	887.08	133.99	0.00	0.00	7/1/2020	Nov-20	
Terminal	TER_TR03	TER086	1.43	Reverse Power Flow - min	1.43	Reverse Power Flow - max		10,380	8,170		2,017	2,001	Yes	LTC	No	Radial	887.08	133.99	290.00	0.00	7/1/2020	Nov-20	
Tanner's Lake	TLK_TR01	TLK023	0.98	Unintentional Islanding - min	0.98	Unintentional Islanding - max		16,651	16,625		1,485	1,485	No	LTC	No	Radial	288.96	4.56	0.00	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR02	TLK032	1.03	Unintentional Islanding - min	1.03	Unintentional Islanding - max		15,221	12,419		1,574	1,574	No	LTC	No	Radial	107.49	5.80	0.00	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR02	TLK034	0.90	Unintentional Islanding - min	0.90	Unintentional Islanding - max		15,221	12,419		1,362	1,362	No	LTC	No	Radial	107.49	5.80	0.00	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR01	TLK061	0.30	Thermal for Gen - min	0.48	Unintentional Islanding - max		16,651	16,625		2,548	2,375	Yes	LTC	No	Radial	288.96	4.56	27.57	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR01	TLK062	0.50	Unintentional Islanding - min	0.50	Unintentional Islanding - max		16,651	16,625		2,345	2,345	Yes	LTC	No	Radial	288.96	4.56	181.00	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR01	TLK064	0.28	Unintentional Islanding - min	0.28	Unintentional Islanding - max		16,651	16,625		2,077	1,767	Yes	LTC	No	Radial	288.96	4.56	19.50	4.56	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR01	TLK065	0.64	Unintentional Islanding - min	0.64	Unintentional Islanding - max		16,651	16,625		874	874	No	LTC	No	Radial	288.96	4.56	0.00	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR01	TLK066	0.41	Unintentional Islanding - min	0.41	Unintentional Islanding - max		16,651	16,625		2,571	1,989	Yes	LTC	No	Radial	288.96	4.56	8.80	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR01	TLK067	0.27	Unintentional Islanding - min	0.27	Unintentional Islanding - max		16,651	16,625		2,398	1,946	Yes	LTC	No	Radial	288.96	4.56	52.09	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR02	TLK071	0.20	Unintentional Islanding - min	0.20	Unintentional Islanding - max		15,221	12,419		1,411	1,119	Yes	LTC	No	Radial	107.49	5.80	42.62	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR02	TLK073	0.19	Unintentional Islanding - min	0.19	Unintentional Islanding - max		15,221	12,419		1,321	1,089	Yes	LTC	No	Radial	107.49	5.80	46.14	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR02	TLK075	0.33	Unintentional Islanding - min	0.33	Unintentional Islanding - max		15,221	12,419		2,029	1,879	Yes	LTC	No	Radial	107.49	5.80	2.96	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR02	TLK076	0.47	Unintentional Islanding - min	0.47	Unintentional Islanding - max		15,221	12,419		642	642	No	LTC	No	Radial	107.49	5.80	0.00	0.00	7/1/2021	Nov-21	
Tanner's Lake	TLK_TR02	TLK077	0.45	Unintentional Islanding - min	0.87	Unintentional Islanding - max		15,221	12,419		4,421	3,598	Yes	LTC	No	Radial	107.49	5.80	15.77	5.80	7/1/2021	Nov-21	
Tracy	TRA_TR01	TRA001	0.20	Reverse Power Flow - min	0.20	Reverse Power Flow - max		442	-		248	-	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Tracy	TRA_TR01	TRA002	0.10	Primary Over-Voltage - min	0.15	Reverse Power Flow - max		442	-		194	-	Yes	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Tracy Switchin	TSS_TR01	TSS061	0.10	Primary Over-Voltage - min	4.25	Breaker Relay Reduction of Reach - max		1,016	156		1,016	-	Yes	Regulator	Yes	Radial	4,058.60	1,000.00	4,058.60	1,000.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation

PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Twin Lake	TWL_TR01	TWL061	1.10	Primary Over-Voltage - min	1.98	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	2,022	1,726	Yes	LTC	No	Radial	347.29	10.23	0.00	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR01	TWL062	0.90	Primary Over-Voltage - min	1.48	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	1,703	1,300	Yes	LTC	No	Radial	347.29	10.23	13.62	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR01	TWL063	1.10	Primary Over-Voltage - min	1.64	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	1,844	1,789	Yes	LTC	No	Radial	347.29	10.23	42.80	10.23	1/1/2021	Aug-21	
Twin Lake	TWL_TR01	TWL064	0.90	Thermal for Gen - min	1.62	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	1,746	1,456	Yes	LTC	No	Radial	347.29	10.23	2.32	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR01	TWL065	0.90	Thermal for Gen - min	2.49	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	2,802	2,400	Yes	LTC	No	Radial	347.29	10.23	63.75	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR01	TWL066	0.52	Unintentional Islanding - min	1.45	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	1,552	1,414	Yes	LTC	No	Radial	347.29	10.23	47.13	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR01	TWL067	0.90	Thermal for Gen - min	1.35	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	1,503	1,334	Yes	LTC	No	Radial	347.29	10.23	15.44	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR01	TWL068	0.60	Thermal for Gen - min	1.64	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	2,121	1,612	Yes	LTC	No	Radial	347.29	10.23	26.24	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR01	TWL069	0.50	Primary Over-Voltage - min	1.64	Unintentional Islanding - max	[redacted]	18,643	15,469	[redacted]	1,811	1,612	Yes	LTC	No	Radial	347.29	10.23	136.00	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL071	0.80	Primary Over-Voltage - min	1.40	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	1,502	1,202	Yes	LTC	No	Radial	363.25	383.00	24.52	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL072	0.90	Thermal for Gen - min	2.89	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	2,915	2,247	Yes	LTC	No	Radial	363.25	383.00	10.72	200.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL073	0.39	Unintentional Islanding - min	0.39	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	707	608	Yes	LTC	No	Radial	363.25	383.00	33.57	183.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL074	0.90	Thermal for Gen - min	1.72	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	1,726	1,513	Yes	LTC	No	Radial	363.25	383.00	184.68	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL075	0.10	Primary Over-Voltage - min	0.63	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	1,020	806	Yes	LTC	No	Radial	363.25	383.00	19.64	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL076	0.90	Thermal for Gen - min	1.85	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	2,121	1,825	Yes	LTC	No	Radial	363.25	383.00	17.00	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL077	0.90	Thermal for Gen - min	1.02	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	1,077	854	Yes	LTC	No	Radial	363.25	383.00	0.00	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL078	0.60	Thermal for Gen - min	1.60	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	1,712	1,603	Yes	LTC	No	Radial	363.25	383.00	61.61	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR02	TWL079	0.90	Thermal for Gen - min	3.37	Unintentional Islanding - max	[redacted]	19,105	15,455	[redacted]	3,513	2,915	Yes	LTC	No	Radial	363.25	383.00	11.52	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR03	TWL081	0.70	Primary Over-Voltage - min	2.45	Unintentional Islanding - max	[redacted]	8,628	7,354	[redacted]	2,530	2,184	Yes	LTC	No	Radial	277.61	120.00	160.00	120.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR03	TWL082	0.50	Thermal for Gen - min	1.83	Unintentional Islanding - max	[redacted]	8,628	7,354	[redacted]	1,924	1,533	Yes	LTC	No	Radial	277.61	120.00	0.00	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR03	TWL083	0.90	Thermal for Gen - min	1.28	Unintentional Islanding - max	[redacted]	8,628	7,354	[redacted]	1,825	1,825	Yes	LTC	No	Radial	277.61	120.00	70.00	0.00	1/1/2021	Aug-21	
Twin Lake	TWL_TR03	TWL089	0.90	Thermal for Gen - min	1.97	Unintentional Islanding - max	[redacted]	8,628	7,354	[redacted]	2,121	1,825	Yes	LTC	No	Radial	277.61	120.00	47.62	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP061	0.90	Thermal for Gen - min	1.58	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	2,025	2,025	Yes	LTC	No	Radial	2,267.93	212.72	2,000.00	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP062	0.90	Thermal for Gen - min	2.39	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	3,096	3,083	Yes	LTC	No	Radial	2,267.93	212.72	197.37	212.72	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP063	0.90	Thermal for Gen - min	2.21	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	2,929	2,506	Yes	LTC	No	Radial	2,267.93	212.72	53.62	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP064	0.90	Thermal for Gen - min	1.83	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	2,340	2,142	Yes	LTC	No	Radial	2,267.93	212.72	0.00	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP065	0.79	Unintentional Islanding - min	0.79	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	1,502	1,333	Yes	LTC	No	Radial	2,267.93	212.72	0.00	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP066	0.30	Thermal for Gen - min	1.35	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	1,965	1,300	Yes	LTC	No	Radial	2,267.93	212.72	5.05	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP067	0.44	Unintentional Islanding - min	0.44	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	539	495	Yes	LTC	No	Radial	2,267.93	212.72	0.00	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP068	0.90	Thermal for Gen - min	0.96	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	1,460	1,204	Yes	LTC	No	Radial	2,267.93	212.72	11.89	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR01	UPP069	0.39	Unintentional Islanding - min	0.39	Unintentional Islanding - max	[redacted]	20,580	16,405	[redacted]	502	224	Yes	LTC	No	Radial	2,267.93	212.72	0.00	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR03	UPP081	0.90	Thermal for Gen - min	1.17	Unintentional Islanding - max	[redacted]	19,791	16,114	[redacted]	1,596	1,596	Yes	LTC	No	Radial	326.45	16.86	8.25	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR03	UPP082	0.50	Thermal for Gen - min	1.46	Unintentional Islanding - max	[redacted]	19,791	16,114	[redacted]	2,416	2,262	Yes	LTC	No	Radial	326.45	16.86	87.96	9.54	1/1/2021	Aug-21	
Upper Levee	UPP_TR03	UPP083	0.66	Unintentional Islanding - min	0.66	Unintentional Islanding - max	[redacted]	19,791	16,114	[redacted]	869	538	Yes	LTC	No	Radial	326.45	16.86	0.00	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR03	UPP084	0.18	Unintentional Islanding - min	2.20	Unintentional Islanding - max	[redacted]	19,791	16,114	[redacted]	3,093	2,559	Yes	LTC	No	Radial	326.45	16.86	153.71	7.32	1/1/2021	Aug-21	
Upper Levee	UPP_TR03	UPP085	0.90	Thermal for Gen - min	1.93	Unintentional Islanding - max	[redacted]	19,791	16,114	[redacted]	2,510	1,972	Yes	LTC	No	Radial	326.45	16.86	33.64	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR03	UPP086	0.90	Thermal for Gen - min	1.32	Unintentional Islanding - max	[redacted]	19,791	16,114	[redacted]	1,883	1,456	Yes	LTC	No	Radial	326.45	16.86	38.57	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR03	UPP088	1.02	Unintentional Islanding - min	1.02	Unintentional Islanding - max	[redacted]	19,791	16,114	[redacted]	3,752	3,716	Yes	LTC	No	Radial	326.45	16.86	0.00	0.00	1/1/2021	Aug-21	
Upper Levee	UPP_TR03	UPP089	0.90	Thermal for Gen - min	1.89	Unintentional Islanding - max	[redacted]	19,791	16,114	[redacted]	2,518	2,014	Yes	LTC	No	Radial	326.45	16.86	4.32	0.00	1/1/2021	Aug-21	
Vesili	VES_TR01	VES021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	731	731	[redacted]	731	731	Yes	Regulator	No	Radial	9,033.94	1,000.00	9,033.94	1,000.00	7/1/2020	Nov-20	
Villard	VIL_TR01	VIL021	0.18	Reverse Power Flow - min	0.18	Reverse Power Flow - max	[redacted]	189	189	[redacted]	189	189	No	Regulator	No	Radial	1,000.00	0.00	1,000.00	0.00	7/1/2020	Nov-20	
Viking	VKG_TR01	VKG061	0.29	Unintentional Islanding - min	0.29	Unintentional Islanding - max	[redacted]	8,538	7,151	[redacted]	1,547	1,284	Yes	LTC	No	Radial	855.71	0.00	0.00	0.00	1/1/2021	Aug-21	
Viking	VKG_TR01	VKG065	0.89	Unintentional Islanding - min	0.89	Unintentional Islanding - max	[redacted]	8,538	7,151	[redacted]	2,509	2,246	Yes	LTC	No	Radial	855.71	0.00	0.00	0.00	1/1/2021	Aug-21	
Viking	VKG_TR01	VKG071	0.27	Unintentional Islanding - min	0.27	Unintentional Islanding - max	[redacted]	8,538	7,151	[redacted]	1,444	1,334	Yes	LTC	No	Radial	855.71	0.00	0.00	0.00	1/1/2021	Aug-21	
Viking	VKG_TR01	VKG072	0.60	Unintentional Islanding - min	0.60	Unintentional Islanding - max	[redacted]	8,538	7,151	[redacted]	2,721	2,337	Yes	LTC	No	Radial	855.71	0.00	855.71	0.00	1/1/2021	Aug-21	
Vermillion	VMR_TR03	VMR061	0.42	Reverse Power Flow - min	0.42	Reverse Power Flow - max	[redacted]	3,545	3,373	[redacted]	570	497	Yes	LTC	Yes	Radial	7,246.59	0.00	7,013.75	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Vermillion	VMR_TR03	VMR062	1.15	Reverse Power Flow - min	1.15	Reverse Power Flow - max	[redacted]	3,545	3,373	[redacted]	1,692	1,590	Yes	LTC	No	Radial	7,246.59	0.00	187.84	0.00	7/1/2020	Nov-20	
Vermillion	VMR_TR03	VMR063	0.97	Reverse Power Flow - min	0.97	Reverse Power Flow - max	[redacted]	3,545	3,373	[redacted]	1,282	1,282	Yes	LTC	No	Radial	7,246.59	0.00	45.00	0.00	7/1/2020	Nov-20	
Wabasha	WAB_TR01	WAB021	0.30	Thermal for Gen - min	2.65	Breaker Relay Reduction of Reach - max	[redacted]	909	909	[redacted]	903	903	No	Regulator	No	Radial	2.79	7.20	2.79	7.20	7/1/2020	Nov-20	
Wabasha	WAB_TR02	WAB031	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	1,914	1,914	[redacted]	1,895	1,895	No	LTC	Yes	Radial	6,333.27	4,003.75	6,333.27	4,003.75	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Wakefield	WAK_TR02	WAK321	1.46	Thermal for Gen - min	1.46	Breaker Relay Reduction of Reach - max	[redacted]	2,907	2,496	[redacted]	2,907	2,496	Yes	LTC	Yes	Radial	5,011.39	0.00	5,011.39	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Waseca	WAS_TR02	WAS081	0.00	Reverse Power Flow - min	0.00	Reverse Power Flow - max	[redacted]	0	0	[redacted]	0	0	Yes	Regulator	Yes	Radial	10,000.00	0.00	10,000.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Waseca	WAS_TR04	WAS091	1.10	Thermal for Gen - min	5.07	Unintentional Islanding - max	[redacted]	8,985	3,945	[redacted]	6,709	6,152	Yes	LTC	No	Radial	13,109.67	10,000.00	1,996.00	0.00	7/1/2021	Nov-21	
Waseca	WAS_TR04	WAS092	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	8,985	3,945	[redacted]	2,838	1,752	Yes	LTC	Yes	Radial	13,109.67	10,000.00	11,113.67	10,000.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Waseca	WAS_TR03	WAS231	1.62	Reverse Power Flow - min	1.62	Reverse Power Flow - max	[redacted]	0	0	[redacted]	0	0	Yes	LTC	No	Radial	0.00	0.00	0.00	0.00	7/1/2020	Nov-20	
Waterville	WAT_TR03	WAT021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	775	775	[redacted]	803	803	No	Regulator	Yes	Radial	3,065.99	0.00	3,065.99	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Waterville	WAT_TR01	WAT081	0.03	Unintentional Islanding - min	1.01	Unintentional Islanding - max	[redacted]	1,758	1,758	[redacted]	1,705	1,705	No	Regulator	No	Radial	6,036.91	5,000.00	6,036.91	5,000.00	7/1/2021	Nov-21	
Waterville	WAT_TR04	WAT221	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	753	490	[redacted]	651	490	No	Regulator	No	Radial	5,000.00	0.00	5,000.00	0.00	7/1/2020	Nov-20	
Waverly	WAV_TR01	WAV021	0.30	Primary Over-Voltage - min	4.38	Breaker Relay Reduction of Reach - max	[redacted]	764	764	[redacted]	764	764	No	Regulator	Yes	Radial	5,048.07	0.00	5,048.07	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Williams Broth	WBP_TR03	WBP061	1.30	Thermal for Gen - min	3.46	Reverse Power Flow - max	[redacted]	5,970	5,665	[redacted]	4,748	4,447	Yes	LTC	No	Radial	30.00	0.00	30.00	0.00	7/1/2020	Nov-20	
Williams Broth	WBP_TR03	WBP062	1.30	Reverse Power Flow - min	1.30	Reverse Power Flow - max	[redacted]	5,970	5,665	[redacted]	1,124	1,124	No	LTC	No	Radial	30.00	0.00	0.00	0.00	7/1/2020	Nov-20	
West Coon Ra	WCR_TR03	WCR061	0.70	Unintentional Islanding - min	0.70	Unintentional Islanding - max	[redacted]	6,125	4,764	[redacted]	1,716	1,412	Yes	Regulator	No	Radial	127.99	0.00	18.74	0.00	7/1/2021	Nov-21	
West Coon Ra	WCR_TR03	WCR062	0.90	Primary Over-Voltage - min	1.19	Unintentional Islanding - max	[redacted]	6,125	4,764	[redacted]	2,232	1,711	Yes	Regulator	No	Radial	127.99	0.00	51.06	0.00	7/1/2021	Nov-21	
West Coon Ra	WCR_TR03	WCR063	0.90	Thermal for Gen - min	1.30	Unintentional Islanding - max	[redacted]	6,125	4,764	[redacted]	2,408	1,839	Yes	Regulator	No	Radial	127.99	0.00	58.19	0.00	7/1/2021	Nov-21	
West Coon Ra	WCR_TR01	WCR311	2.89	Unintentional Islanding - min	2.89	Unintentional Islanding - max	[redacted]	9,135	9,015	[redacted]	5,930	5,013	Yes	LTC	No	Radial	64.76	0.00	64.76	0.00	7/1/2021	Nov-21	
West Coon Ra	WCR_TR02	WCR321	0.10	Thermal for Gen - min	3.59	Unintentional Islanding - max	[redacted]	15,073	14,195	[redacted]	7,607	6,265	Yes	LTC	No	Radial	754.93	1,000.00	540.68	0.00	7/1/2021	Nov-21	
West Coon Ra	WCR_TR02	WCR322	0.90	Primary Over-Voltage - min	4.73	Unintentional Islanding - max	[redacted]	15,073	14,195	[redacted]	9,099	7,682	Yes	LTC	No	Radial	754.93	1,000.00	214.25	1,000.00	7/1/2021	Nov-21	
Waconia	WCS_TR01	WCS062	0.72	Unintentional Islanding - min	0.72	Unintentional Islanding - max	[redacted]	2,341	2,321	[redacted]	1,020	806	Yes	Regulator	No	Radial	9,149.92	15.34	21.74	0.00	7/1/2021	Nov-21	
Waconia	WCS_TR01	WCS064	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max	[redacted]	2,341	2,321	[redacted]	1,602	980	Yes	Regulator	Yes	Radial	9,149.92	15.34	9,128.18	15.34	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Waconia	WCS_TR02	WCS071	0.90	Thermal for Gen - min	1.67	Unintentional Islanding - max	[redacted]	3,566	3,184	[redacted]	2,085	1,761	Yes	Regulator	No	Radial	2,018.70	1,000.00	13.77	0.00	7/1/2021	Nov-21	
Waconia	WCS_TR02	WCS072	0.18	Unintentional Islanding - min	0.18	Unintentional Islanding - max	[redacted]	3,566	3,184	[redacted]	1,108	874	Yes	Regulator	No	Radial	2,018.70	1,000.00	2,004.93	1,000.00	7/1/2021	Nov-21	
Woodbury	WDY_TR01	WDY311	0.30	Thermal for Gen - min	1.96	Unintentional Islanding - max	[redacted]	13,959	11,033	[redacted]	3,384	2,754	Yes	LTC	No	Radial	159.30	38.82	98.34	33.82	7/1/2021	Nov-21	
Woodbury	WDY_TR01	WDY312	2.20	Thermal for Gen - min	7.33	Unintentional Islanding - max	[redacted]	13,959	11,033	[redacted]	9,737	7,932	Yes	LTC	No	Radial	159.30	38.82	60.96	5.00	7/1/2021	Nov-21	
Woodbury	WDY_TR02	WDY321	0.90	Thermal for Gen - min	2.83	Unintentional Islanding - max	[redacted]	10,993	9,433	[redacted]	4,214	3,588	Yes	LTC	No	Radial	751.00	0.00	40.00	0.00	7/1/2021	Nov-21	
Woodbury	WDY_TR02	WDY322	3.60	Thermal for Gen - min	4.66	Unintentional Islanding - max	[redacted]	10,993	9,433	[redacted]	7,151	5,541	Yes	LTC	No	Radial	751.00	0.00	711.00	0.00	7/1/2021	Nov-21	
West Byron	WEB_TR01	WEB021	0.00	Thermal for Gen - min	1.56	Primary Over-Voltage - max	[redacted]	2,586	2,348	[redacted]	2,586	2,348	Yes	Regulator	Yes	Radial	9,028.72	5,010.00	9,028.72	5,010.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
West Faribaul	WEF_TR07	WEF061	0.20	Thermal for Gen - min	1.39	Reverse Power Flow - max	[redacted]	1,923	1,555	[redacted]	1,923	1,555	Yes	Regulator	No	Radial	33.30	0.00	33.30	0.00	7/1/2020	Nov-20	
West Faribaul	WEF_TR03	WEF071	0.00	Unintentional Islanding - min	2.13	Unintentional Islanding - max	[redacted]	2,532	2,001	[redacted]	2,532	2,001	Yes	Regulator	No	Radial	2,040.22	10,700.00	2,040.22	10,700.00	1/1/2021	Aug-21	Known capacity constraints: Capacity could be significantly impacted without substantial system upgrades
West Hastings	WEH_TR01	WEH021	0.60	Primary Over-Voltage - min	1.01	Unintentional Islanding - max	[redacted]	4,278	3,335	[redacted]	2,000	1,711	Yes	LTC	No	Radial	6.09	0.00	6.09	0.00	7/1/2021	Nov-21	
West Hastings	WEH_TR01	WEH022	0.80	Thermal for Gen - min	1.04	Unintentional Islanding - max	[redacted]	4,278	3,335	[redacted]	2,103	1,615	Yes	LTC	No	Radial	6.09	0.00	0.00	0.00	7/1/2021	Nov-21	
Wells Creek	WEL_TR01	WEL021	0.10	Primary Over-Voltage - min	0.52	Thermal for Gen - max	[redacted]	520	520	[redacted]	520	520	No	Regulator	Yes	Radial	1,060.75	1,000.00	1,060.75	1,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Western	WES_TR01	WES061	0.60	Thermal for Gen - min	1.92	Reverse Power Flow - max	[redacted]	13,771	12,276	[redacted]	2,720	2,209	Yes	LTC	No	Radial	459.45	99.90	7.50	0.00	7/1/2020	Nov-20	
Western	WES_TR01	WES062	0.90	Thermal for Gen - min	1.46	Reverse Power Flow - max	[redacted]	13,771	12,276	[redacted]	2,025	1,709	Yes	LTC	No	Radial	459.45	99.90	130.66	0.00	7/1/2020	Nov-20	
Western	WES_TR01	WES063	0.40	Thermal for Gen - min	1.46	Reverse Power Flow - max	[redacted]	13,771	12,276	[redacted]	1,947	1,712	Yes	LTC	No	Radial	459.45	99.90	72.75	0.00	7/1/2020	Nov-20	
Western	WES_TR01	WES064	0.90	Thermal for Gen - min	2.22	Reverse Power Flow - max	[redacted]	13,771	12,276	[redacted]	2,976	2,389	Yes	LTC	No	Radial	459.45	99.90	74.22	99.90	7/1/2020	Nov-20	
Western	WES_TR01	WES065	0.20	Primary Over-Voltage - min	1.28	Breaker Relay Reduction of Reach - max	[redacted]	13,771	12,276	[redacted]	2,891	2,697	Yes	LTC	No	Radial	459.45	99.90	174.33	0.00	7/1/2020	Nov-20	
Western	WES_TR02	WES071	0.90	Thermal for Gen - min	1.34	Reverse Power Flow - max	[redacted]	15,536	12,369	[redacted]	2,010	1,811	Yes	LTC	No	Radial	351.34	27.54	0.00	0.00	7/1/2020	Nov-20	
Western	WES_TR02	WES072	0.90	Thermal for Gen - min	2.03	Reverse Power Flow - max	[redacted]	15,536	12,369	[redacted]	2,864	1,970	Yes	LTC	No	Radial	351.34	27.54	39.03	0.00	7/1/2020	Nov-20	
Western	WES_TR02	WES073	0.30	Primary Over-Voltage - min	1.02	Breaker Relay Reduction of Reach - max	[redacted]	15,536	12,369	[redacted]	2,010	1,712	Yes	LTC	No	Radial	351.34	27.54	75.71	27.54	7/1/2020	Nov-20	
Western	WES_TR02	WES074	0.50	Thermal for Gen - min	1.92	Reverse Power Flow - max	[redacted]	15,536	12,369	[redacted]	2,746	2,236	Yes	LTC	No	Radial	351.34	27.54	88.13	0.00	7/1/2020	Nov-20	
Western	WES_TR02	WES075	0.90	Thermal for Gen - min	1.78	Reverse Power Flow - max	[redacted]	15,536	12,369	[redacted]	2,532	1,965	Yes	LTC	No	Radial	351.34	27.54	77.07	0.00	7/1/2020	Nov-20	
Western	WES_TR02	WES076	0.50	Thermal for Gen - min	1.50	Reverse Power Flow - max	[redacted]	15,536	12,369	[redacted]	2,040	1,746	Yes	LTC	No	Radial	351.34	27.54	71.41	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL071	0.90	Thermal for Gen - min	1.91	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	1,649	1,400	Yes	LTC	No	Radial	898.63	11.32	68.88	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL072	0.70	Thermal for Gen - min	2.02	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	2,760	2,707	Yes	LTC	No	Radial	898.63	11.32	255.03	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL073	0.90	Thermal for Gen - min	1.00	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	1,513	1,315	Yes	LTC	No	Radial	898.63	11.32	146.22	4.32	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL074	0.90	Thermal for Gen - min	1.49	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	1,930	1,360	Yes	LTC	No	Radial	898.63	11.32	52.62	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL075	0.90	Thermal for Gen - min	1.31	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	1,628	1,334	Yes	LTC	No	Radial	898.63	11.32	40.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL076	0.90	Thermal for Gen - min	1.54	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	2,102	1,746	Yes	LTC	No	Radial	898.63	11.32	49.60	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL077	0.90	Thermal for Gen - min	1.28	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	1,628	1,530	Yes	LTC	No	Radial	898.63	11.32	69.30	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL078	0.90	Thermal for Gen - min	1.30	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	1,875	1,619	Yes	LTC	No	Radial	898.63	11.32	8.55	4.60	7/1/2020	Nov-20	
Wilson	WIL_TR03	WIL079	1.50	Thermal for Gen - min	1.51	Reverse Power Flow - max	[redacted]	19,573	14,747	[redacted]	2,121	1,726	Yes	LTC	No	Radial	898.63	11.32	208.43	2.40	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL081	1.00	Thermal for Gen - min	1.55	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	2,138	1,825	Yes	LTC	No	Radial	540.52	0.24	53.40	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL082	0.70	Thermal for Gen - min	1.15	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	1,616	1,304	Yes	LTC	No	Radial	540.52	0.24	131.13	0.24	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL083	0.90	Thermal for Gen - min	1.37	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	1,513	1,237	Yes	LTC	No	Radial	540.52	0.24	0.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL084	0.60	Thermal for Gen - min	1.34	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	1,899	1,899	Yes	LTC	No	Radial	540.52	0.24	0.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL085	0.60	Thermal for Gen - min	2.40	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	3,324	2,335	Yes	LTC	No	Radial	540.52	0.24	104.01	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL086	0.20	Thermal for Gen - min	1.96	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	2,869	2,280	Yes	LTC	No	Radial	540.52	0.24	53.23	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL087	0.90	Thermal for Gen - min	2.51	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	3,152	2,648	Yes	LTC	No	Radial	540.52	0.24	0.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL088	0.46	Reverse Power Flow - min	0.46	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	626	609	Yes	LTC	No	Radial	540.52	0.24	0.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR04	WIL089	0.90	Thermal for Gen - min	2.42	Reverse Power Flow - max	[redacted]	18,861	17,902	[redacted]	3,147	2,370	Yes	LTC	No	Radial	540.52	0.24	198.75	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR05	WIL091	0.90	Thermal for Gen - min	1.31	Reverse Power Flow - max	[redacted]	18,781	15,236	[redacted]	1,810	1,395	Yes	LTC	No	Radial	1,206.85	40.00	30.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR05	WIL092	0.53	Unintentional Islanding - min	0.53	Unintentional Islanding - max	[redacted]	18,781	15,236	[redacted]	1,894	1,760	Yes	LTC	No	Radial	1,206.85	40.00	113.60	0.00	7/1/2021	Nov-21	
Wilson	WIL_TR05	WIL093	0.47	Unintentional Islanding - min	0.47	Unintentional Islanding - max	[redacted]	18,781	15,236	[redacted]	1,787	1,520	Yes	LTC	No	Radial	1,206.85	40.00	975.80	0.00	7/1/2021	Nov-21	
Wilson	WIL_TR05	WIL094	1.32	Reverse Power Flow - min	1.32	Reverse Power Flow - max	[redacted]	18,781	15,236	[redacted]	1,582	1,512	Yes	LTC	No	Radial	1,206.85	40.00	0.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR05	WIL095	0.90	Thermal for Gen - min	2.43	Reverse Power Flow - max	[redacted]	18,781	15,236	[redacted]	2,977	2,234	Yes	LTC	No	Radial	1,206.85	40.00	0.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR05	WIL096	1.00	Thermal for Gen - min	2.06	Reverse Power Flow - max	[redacted]	18,781	15,236	[redacted]	2,470	1,715	Yes	LTC	No	Radial	1,206.85	40.00	0.00	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR05	WIL097	0.50	Thermal for Gen - min	1.54	Reverse Power Flow - max	[redacted]	18,781	15,236	[redacted]	2,105	1,693	Yes	LTC	No	Radial	1,206.85	40.00	19.87	0.00	7/1/2020	Nov-20	
Wilson	WIL_TR05	WIL098	0.60	Thermal for Gen - min	1.92	Reverse Power Flow - max	[redacted]	18,781	15,236	[redacted]	2,480	1,943	Yes	LTC	No	Radial	1,206.85	40.00	67.58	40.00	7/1/2020	Nov-20	
Winona	WIN_TR01	WIN021	0.03	Unintentional Islanding - min	0.48	Unintentional Islanding - max	[redacted]	4,342	3,911	[redacted]	700	700	Yes	LTC	No	Radial	12.75	0.00	0.00	0.00	7/1/2021	Nov-21	
Winona	WIN_TR01	WIN022	0.10	Thermal for Gen - min	1.16	Reverse Power Flow - max	[redacted]	4,342	3,911	[redacted]	1,709	1,334	Yes	LTC	No	Radial	12.75	0.00	0.00	0.00	7/1/2020	Nov-20	
Winona	WIN_TR01	WIN023	0.20	Thermal for Gen - min	1.28	Unintentional Islanding - max	[redacted]	4,342	3,911	[redacted]	1,860	1,700	Yes	LTC	No	Radial	12.75	0.00	12.75	0.00	7/1/2021	Nov-21	
Winona	WIN_TR02	WIN032	0.80	Thermal for Gen - min	2.60	Unintentional Islanding - max	[redacted]	6,637	6,619	[redacted]	3,401	2,500	Yes	LTC	No	Radial	7.71	0.00	0.00	0.00	7/1/2021	Nov-21	
Winona	WIN_TR02	WIN033	0.10	Thermal for Gen - min	2.08	Unintentional Islanding - max	[redacted]	6,637	6,619	[redacted]	2,720	2,377	Yes	LTC	No	Radial	7.71	0.00	1.71	0.00	7/1/2021	Nov-21	
Winona	WIN_TR02	WIN034	0.60	Thermal for Gen - min	2.04	Unintentional Islanding - max	[redacted]	6,637	6,619	[redacted]	2,662	2,608	Yes	LTC	No	Radial	7.71	0.00	6.00	0.00	7/1/2021	Nov-21	

PROTECTED DATA SHADED

Substation	Transformer Name	Feeder	Minimum (MW)	Min Limiting Factor	Maximum (MW)	Max Limiting Factor	Substation Transformer Forecasted Peak Load (kVA)	Substation Transformer Minimum Load (kVA)	Transformer Absolute Min (kVA)	Feeder Forecasted Peak Load (kVA)	Feeder Daytime Minimum Load (kVA)	Feeder Absolute Min (kVA)	Actual Daytime Minimum Load	LTC or Regulator	VSR Capable	Network or Radial	Substation Transformer Installed DG (kVA)	Substation Transformer Queued DG (kVA)	Feeder Installed DG (kVA)	Feeder Queued DG (kVA)	Data Cutoff	Latest Quarterly Update MM-YY	Notes
Winona	WIN_TR03	WIN041	0.15	Unintentional Islanding - min	0.15	Unintentional Islanding - max		5,523	4,031		224	100	Yes	LTC	No	Radial	74.60	10,000.00	0.00	0.00	7/1/2021	Nov-21	
Winona	WIN_TR03	WIN042	0.10	Thermal for Gen - min	1.45	Unintentional Islanding - max		5,523	4,031		2,039	1,676	Yes	LTC	No	Radial	74.60	10,000.00	18.42	0.00	7/1/2021	Nov-21	
Winona	WIN_TR03	WIN043	0.10	Thermal for Gen - min	0.41	Breaker Relay Reduction of Reach - max		5,523	4,031		2,309	1,746	Yes	LTC	No	Radial	74.60	10,000.00	56.19	10,000.00	7/1/2020	Nov-20	
Watkins	WKN_TR01	WKN001	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		330	330		330	330	No	Regulator	No	Radial	769.00	0.00	769.00	0.00	7/1/2020	Nov-20	
Wobegon Trai	WOB_TR01	WOB021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		806	600		224	141	Yes	Regulator	Yes	Radial	6,015.24	0.00	6,015.24	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Wobegon Trai	WOB_TR01	WOB022	0.10	Thermal for Gen - min	0.17	Reverse Power Flow - max		806	600		300	300	Yes	Regulator	No	Radial	6,015.24	0.00	0.00	0.00	7/1/2020	Nov-20	
West River Ro	WRR_TR01	WRR061	1.00	Thermal for Gen - min	1.30	Reverse Power Flow - max		8,601	7,614		1,761	1,504	Yes	LTC	No	Radial	106.04	43.53	45.00	0.00	7/1/2020	Nov-20	
West River Ro	WRR_TR01	WRR064	0.90	Thermal for Gen - min	2.06	Reverse Power Flow - max		8,601	7,614		2,729	2,417	Yes	LTC	No	Radial	106.04	43.53	61.04	43.53	7/1/2020	Nov-20	
West River Ro	WRR_TR02	WRR074	1.10	Thermal for Gen - min	2.38	Reverse Power Flow - max		10,807	9,341		2,721	2,118	Yes	LTC	No	Radial	346.70	0.00	0.00	0.00	7/1/2020	Nov-20	
West River Ro	WRR_TR02	WRR075	0.90	Thermal for Gen - min	1.87	Reverse Power Flow - max		10,807	9,341		2,579	2,300	Yes	LTC	No	Radial	346.70	0.00	346.70	0.00	7/1/2020	Nov-20	
West River Ro	WRR_TR03	WRR081	1.50	Thermal for Gen - min	1.74	Reverse Power Flow - max		8,583	7,496		2,225	1,383	Yes	LTC	No	Radial	221.43	0.00	29.02	0.00	7/1/2020	Nov-20	
West River Ro	WRR_TR03	WRR084	0.90	Thermal for Gen - min	1.75	Reverse Power Flow - max		8,583	7,496		2,316	1,892	Yes	LTC	No	Radial	221.43	0.00	72.51	0.00	7/1/2020	Nov-20	
West River Ro	WRR_TR03	WRR085	0.74	Reverse Power Flow - min	0.74	Reverse Power Flow - max		8,583	7,496		1,008	1,008	Yes	LTC	No	Radial	221.43	0.00	119.90	0.00	7/1/2020	Nov-20	
Winsted	WSD_TR01	WSD061	0.60	Thermal for Gen - min	0.75	Reverse Power Flow - max		1,300	1,300		965	965	No	Regulator	Yes	Radial	7,012.00	0.00	7,012.00	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Westgate	WSG_TR03	WSG061	1.16	Unintentional Islanding - min	1.16	Unintentional Islanding - max		11,116	10,477		1,649	1,360	Yes	LTC	No	Radial	448.86	0.00	47.34	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR03	WSG062	0.49	Unintentional Islanding - min	1.01	Unintentional Islanding - max		11,116	10,477		1,700	1,655	Yes	LTC	No	Radial	448.86	0.00	99.90	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR03	WSG063	1.06	Unintentional Islanding - min	1.06	Unintentional Islanding - max		11,116	10,477		1,503	1,300	Yes	LTC	No	Radial	448.86	0.00	204.94	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR03	WSG064	1.40	Primary Over-Voltage - min	1.68	Unintentional Islanding - max		11,116	10,477		2,400	2,009	Yes	LTC	No	Radial	448.86	0.00	29.32	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR03	WSG065	1.20	Primary Over-Voltage - min	1.35	Unintentional Islanding - max		11,116	10,477		2,010	1,530	Yes	LTC	No	Radial	448.86	0.00	11.06	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR03	WSG066	0.17	Unintentional Islanding - min	0.17	Unintentional Islanding - max		11,116	10,477		1,513	1,334	Yes	LTC	No	Radial	448.86	0.00	56.31	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR04	WSG071	1.30	Primary Over-Voltage - min	1.53	Unintentional Islanding - max		9,362	9,362		2,138	1,649	Yes	LTC	No	Radial	787.96	0.00	43.45	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR04	WSG072	0.33	Unintentional Islanding - min	0.33	Unintentional Islanding - max		9,362	9,362		608	603	Yes	LTC	No	Radial	787.96	0.00	0.00	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR04	WSG073	0.40	Unintentional Islanding - min	0.40	Unintentional Islanding - max		9,362	9,362		530	502	Yes	LTC	No	Radial	787.96	0.00	0.00	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR04	WSG074	1.60	Primary Over-Voltage - min	2.42	Unintentional Islanding - max		9,362	9,362		3,415	3,373	Yes	LTC	No	Radial	787.96	0.00	10.00	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR04	WSG075	1.40	Thermal for Gen - min	1.57	Unintentional Islanding - max		9,362	9,362		2,202	1,649	Yes	LTC	No	Radial	787.96	0.00	649.63	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR04	WSG076	0.90	Primary Over-Voltage - min	0.96	Unintentional Islanding - max		9,362	9,362		1,334	1,300	Yes	LTC	No	Radial	787.96	0.00	84.88	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR05	WSG351	0.24	Unintentional Islanding - min	0.24	Unintentional Islanding - max		4,832	4,643		409	117	Yes	LTC	No	Radial	432.87	800.00	279.90	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR05	WSG352	0.70	Thermal for Gen - min	2.40	Unintentional Islanding - max		4,832	4,643		3,714	2,597	Yes	LTC	No	Radial	432.87	800.00	152.97	800.00	7/1/2021	Nov-21	
Westgate	WSG_TR06	WSG361	0.30	Thermal for Gen - min	1.38	Unintentional Islanding - max		10,072	6,807		1,807	1,105	Yes	LTC	No	Radial	325.99	0.00	199.30	0.00	7/1/2021	Nov-21	
Westgate	WSG_TR06	WSG362	0.90	Thermal for Gen - min	3.94	Unintentional Islanding - max		10,072	6,807		5,295	3,990	Yes	LTC	No	Radial	325.99	0.00	126.69	0.00	7/1/2021	Nov-21	
Westport	WSP_TR01	WSP021	0.04	Unintentional Islanding - min	0.04	Unintentional Islanding - max		69	69		69	69	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	
West Union	WSU_TR01	WSU021	0.01	Unintentional Islanding - min	0.01	Unintentional Islanding - max		NA	NA		NA	NA	No	Regulator	No	Radial	0.00	0.00	0.00	0.00	7/1/2021	Nov-21	Substation owned by Foreign Utility. Contractual obligations may reduce capacity and increase interconnection timelines
Watab River	WTB_TR01	WTB021	0.50	Thermal for Gen - min	5.88	Breaker Relay Reduction of Reach - max		359	359		359	359	No	Regulator	Yes	Radial	7,060.62	0.00	7,060.62	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Watertown	WTN_TR01	WTN061	0.60	Primary Over-Voltage - min	10.00	Primary Over-Voltage - max		1,525	1,525		646	646	No	Regulator	Yes	Radial	5,107.05	1,000.00	5,072.17	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Watertown	WTN_TR01	WTN062	0.06	Unintentional Islanding - min	0.38	Unintentional Islanding - max		1,525	1,525		975	975	No	Regulator	No	Radial	5,107.05	1,000.00	34.88	1,000.00	7/1/2021	Nov-21	
West Waconia	WWK_TR01	WWK311	0.10	Primary Over-Voltage - min	0.54	Breaker Relay Reduction of Reach - max		5,197	4,835		5,197	4,835	Yes	LTC	Yes	Radial	16,963.58	0.00	16,963.58	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
West Waconia	WWK_TR02	WWK321	0.00	Primary Over-Voltage - min	1.51	Primary Over-Voltage - max		1,826	1,826		1,826	1,826	Yes	LTC	Yes	Radial	6,022.62	1,000.00	6,022.62	1,000.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Wyoming	WYO_TR01	WYO021	0.09	Unintentional Islanding - min	0.36	Unintentional Islanding - max		4,938	4,873		2,815	1,946	Yes	LTC	No	Radial	5,083.46	0.00	64.16	0.00	7/1/2021	Nov-21	
Wyoming	WYO_TR01	WYO022	0.80	Thermal for Gen - min	10.00	Primary Over-Voltage - max		4,938	4,873		2,556	2,346	Yes	LTC	Yes	Radial	5,083.46	0.00	5,019.30	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Wyoming	WYO_TR02	WYO031	0.47	Unintentional Islanding - min	0.47	Unintentional Islanding - max		7,423	6,270		2,500	2,008	Yes	LTC	No	Radial	117.76	9.99	14.99	9.99	7/1/2021	Nov-21	
Wyoming	WYO_TR02	WYO032	0.35	Unintentional Islanding - min	0.35	Unintentional Islanding - max		7,423	6,270		2,042	1,875	Yes	LTC	No	Radial	117.76	9.99	95.15	0.00	7/1/2021	Nov-21	
Wyoming	WYO_TR02	WYO033	0.08	Unintentional Islanding - min	0.58	Unintentional Islanding - max		7,423	6,270		2,476	1,941	Yes	LTC	No	Radial	117.76	9.99	7.62	0.00	7/1/2021	Nov-21	
Crossroads	XRD_TR01	XRD061	1.44	Reverse Power Flow - min	1.44	Reverse Power Flow - max		6,835	5,345		2,163	1,720	Yes	LTC	No	Radial	46.98	0.00	33.30	0.00	7/1/2020	Nov-20	
Crossroads	XRD_TR01	XRD062	1.00	Thermal for Gen - min	1.43	Reverse Power Flow - max		6,835	5,345		2,088	1,616	Yes	LTC	No	Radial	46.98	0.00	13.68	0.00	7/1/2020	Nov-20	
Crossroads	XRD_TR01	XRD063	0.90	Thermal for Gen - min	1.78	Reverse Power Flow - max		6,835	5,345		2,319	1,879	Yes	LTC	No	Radial	46.98	0.00	0.00	0.00	7/1/2020	Nov-20	
Crossroads	XRD_TR02	XRD075	0.60	Reverse Power Flow - min	0.60	Reverse Power Flow - max		6,629	5,036		860	860	Yes	LTC	No	Radial	50.97	0.00	3.75	0.00	7/1/2020	Nov-20	
Crossroads	XRD_TR02	XRD076	0.20	Thermal for Gen - min	0.69	Breaker Relay Reduction of Reach - max		6,629	5,036		2,602	2,184	Yes	LTC	No	Radial	50.97	0.00	26.99	0.00	7/1/2020	Nov-20	
Crossroads	XRD_TR02	XRD077	0.90	Thermal for Gen - min	1.67	Reverse Power Flow - max		6,629	5,036		2,280	1,300	Yes	LTC	No	Radial	50.97	0.00	20.23	0.00	7/1/2020	Nov-20	
Young Americ	YAM_TR01	YAM021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		1,163	414		1,163	414	Yes	Regulator	Yes	Radial	4,922.94	0.00	4,922.94	0.00	7/1/2020	Nov-20	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Young Americ	YAM_TR02	YAM031	0.20	Primary Over-Voltage - min	0.44	Breaker Relay Reduction of Reach - max		1,168	1,009		1,168	1,009	Yes	Regulator	No	Radial	109.20	0.00	109.20	0.00	7/1/2020	Nov-20	
Yellow Medici	YLM_TR01	YLM211	0.09	Reverse Power Flow - min	0.09	Reverse Power Flow - max		1,498	1,498		1,076	1,076	No	Regulator	No	Radial	63.90	0.00	39.90	0.00	7/1/2020	Nov-20	
Yellow Medici	YLM_TR01	YLM212	0.03	Reverse Power Flow - min	0.03	Reverse Power Flow - max		1,498	1,498		422	422	No	Regulator	No	Radial	63.90	0.00	24.00	0.00	7/1/2020	Nov-20	
Zumbro Falls	ZUF_TR01	ZUF021	0.00	Primary Over-Voltage - min	0.00	Primary Over-Voltage - max		745	745		737	737	No	Regulator	No	Radial	4,914.76	0.00	4,914.76	0.00	7/1/2021	Nov-21	
Zumbrota	ZUM_TR01	ZUM021	0.35	Thermal for Gen - min	1.16	Breaker Relay Reduction of Reach - max		2,762	2,762		1,181	1,181	No	Regulator	Yes	Radial	10,086.09	7,199.90	2,013.14	0.00	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Zumbrota	ZUM_TR01	ZUM022	0.06	Unintentional Islanding - min	1.46	Unintentional Islanding - max		2,762	2,762		1,942	1,942	No	Regulator	No	Radial	10,086.09	7,199.90	8,072.95	7,199.90	1/1/2021	Aug-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Rosemount	RMT_TR02	RMT321	0.00	Breaker Relay Reduction of Reach - min	3.25	Unintentional Islanding - max		NA	NA		NA	NA	No	LTC	No	Radial	1140.5	16.69	1,140.50	16.69	7/1/2021	Nov-21	
Rock River	ROC_TR01	ROC090	0.10	Primary Over-Voltage - min	6.31	Breaker Relay Reduction of Reach - max		2,518	754		1,117	1,117	No	Regulator	Yes	Radial	6700	0	4,700.00	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Rock River	ROC_TR01	ROC091	0.20	Primary Over-Voltage - min	6.69	Breaker Relay Reduction of Reach - max		2,518	754		808	808	No	Regulator	Yes	Radial	6700	0	2,000.00	0.00	7/1/2021	Nov-21	Feeder has Voltage Supervisory Reclosing (VSR) at the substation
Raptor	RPO_TR01	RPO311	0.20	Thermal for Gen - min	2.40	Unintentional Islanding - max		NA	NA		NA	NA	No	LTC	No	Radial	303.456	63.03	0.00	0.00	7/1/2021	Nov-21	Newly constructed
Raptor	RPO_TR01	RPO312	2.20	Thermal for Gen - min	2.31	Unintentional Islanding - max		NA	NA		NA	NA	No	LTC	No	Radial	303.456	63.03	303.46	63.03	7/1/2021	Nov-21	Newly constructed
Elm Creek	ECK_TR04	ECK341	1.40	Thermal for Gen - min	1.90	Unintentional Islanding - max		NA	NA		NA	NA	No	LTC	No	Radial	0	0	0.00	0.00	7/1/2021	Nov-21	Newly constructed