



November 13, 2020

VIA E-FILING

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101

Re: In the Matter of Minnesota Power's
Proposed Changes for
Lighting Rates and Options
Docket No. E015/M-20-_____

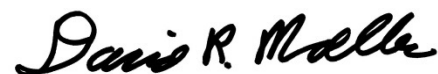
Dear Mr. Seuffert:

Minnesota Power (or the "Company") hereby submits to the Minnesota Public Utilities Commission (or "Commission") proposed modifications for lighting rates and options in the above referenced new miscellaneous docket.

The Company proposes changes to its Outdoor and Area Lighting Service rates intended to simplify the application of this lighting tariff and the addition of more light – emitting diode ("LED") rate options for Lighting Customers. These changes are described in this petition and shown on the redlined tariff page in Attachment 1 to this filing.

If you have any questions regarding this filing, please contact me at (218) 723-3963 or dmoeller@allte.com.

Yours truly,



David R. Moeller
*Senior Attorney and
Director of Regulatory Compliance*

DRM:th
Attach.
c: Service List

**STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

In the Matter of Minnesota Power’s
Proposed Changes for
Lighting Rates and Options

Docket No. E015/GR-16-664
E015/M-20-429, E015/M-20-____
PROPOSED MODIFICATIONS

SUMMARY

Minnesota Power (“Company”) proposes changes to its Outdoor and Area Lighting Service rates intended to simplify the application of this lighting tariff and the addition of more light – emitting diode (“LED”) rate options for Lighting Customers. These changes are described in this petition and shown on the redlined tariff pages in Attachment 1 to this petition.

I. INTRODUCTION

In the 2019 Rate Case¹ Minnesota Power proposed several Lighting rate modifications. Due to the repercussions of COVID-19, the Company resolved the Rate Case in the Emergency Petition of Minnesota Power for Approval to Move Asset-Based Wholesale Sales Credits to the Fuel Adjustment Clause and Resolve the Rate Case². The proposed Lighting rate modifications were withdrawn along with the rest of Minnesota Power's 2019 Rate Case as part of the resolution. This petition requests approval of some of these proposed lighting rate modifications that are important to address prior to the Company's next rate case in order to complete an ongoing lighting conversion project by the end of 2022. By doing this, the Company will save on inventory carrying costs, as well as future installation costs by not having to return to areas just to convert the small number of missing area and flood lights that the Company does not have rates for currently.

II. PROCEDURAL REQUIREMENTS

In accordance with Minn. Rule 7820.2600, 7825.3500, 7829.1300 and additional Commission Orders, Minnesota Power provides the following required information.

A. Name, Address and Telephone Number of Utility

(Minn. Rule 7825.3500 (A) and 7829.1300, subp. 3(A))

Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 722-2641

B. Name, Address and Telephone Number of Utility Attorney

(Minn. Rule 7825.3500 (A) and 7829.1300, subp. 3(B))

David R. Moeller,
Senior Attorney & Director of Regulatory Compliance

¹ Docket No. E015/GR-19-442

² Docket No. E015/M-20-429

Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3963
dmoeller@allete.com (email)

C. Date Proposed Rates Take Effect

This Petition is made in accordance with Minn. Stat. § 216B.05 and no statutorily imposed time frame for a Commission decision applies to this filing. To the extent feasible, Minnesota Power requests expedited review to allow implementation of new LED rates to facilitate installations and energy efficiency.

D. Statute Controlling Schedule for Processing the Petition

Minnesota Power's request for approval of its Proposed Changes for Lighting Rates fall within the definition of a "Miscellaneous Tariff Filing" under Minn. Rules 7829.0100, subp. 11 and 7829.1400, subp. 1 and 4 permitting comments in response to a miscellaneous filing to be filed within 30 days, and reply comments to be filed no later than 10 days thereafter.

E. Utility Employee Responsible for Filing

(Minn. Rule 7829.1300, subp. 3(E))

David R. Moeller
Senior Attorney & Director of Regulatory Compliance
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3963
dmoeller@allete.com

F. Official Service List

Pursuant to Minn. Rule 7829.0700, Minnesota Power respectfully requests the following persons to be included on the Commission's official service list for this proceeding:

David R. Moeller
Senior Attorney & Director of Regulatory Compliance
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3963
dmoeller@allete.com

G. Service on Other Parties

Minnesota Power is eFiling this petition and notifying all persons on the Minnesota Power's General Service List that this petition has been filed through eDockets. A copy of the service list is included with the filing along with a certificate of service.

H. Filing Summary

As required by Minn. Rule 7829.1300, subp. 1, Minnesota Power is including a summary of this filing on a separate page.

III. PROPOSED CHANGES TO LIGHTING RATES AND OPTIONS

A. Proposed Changes for LED Lighting Rates

To continue expanding LED options for customers, we proposed to add several new LED lamps types and sizes. For Outdoor and Area Lighting the Company proposes the following:

- A 10,000 Lumens (71 watts or less) LED option with a proposed monthly rate of \$12.02;
- A 24,000 Lumens (184 watts or less) LED option with a proposed monthly rate of \$18.16; and
- A 43,000 Lumens (316 watts or less) LED option with a proposed monthly rate of \$26.12.

The rates for these three new LED options were calculated using the lighting cost study and initially proposed rates in Minnesota Power's 2019 rate case as a starting point. However, because the final approved Lighting rates in Minnesota Power's rate case were lower than what the Company initially proposed, it is

appropriate to adjust the rates for these new options downward as well. For this adjustment we used the average ratio of the final approved rates to the proposed rates for similarly sized existing Street and Highway Lighting LED rate options, as shown in Table 1 below:

Table 1
Development of Lighting Rate Adjustment Ratio

		Initial	Final		
		Proposed	Approved		
Lumens	Wattage	Rate [1]	Rate [2]	Ratio	
8,800	≤118 watts	\$19.56	\$18.10	0.93	
23,000	≤219 watts	\$24.60	\$22.50	0.91	
30,000	≤278 watts	\$24.43	\$22.50	0.92	
		Average Ratio:		0.92	
[1] Docket 19-442; 11/1/2019 Initial Filing, Volume 3, redlined tariff sheets for Street and Highway Lighting Service.					
[2] Final approved rates for Street and Highway Lighting Service LED rates in Docket 19-442.					

This average ratio of 0.92 was then applied to the initially proposed rates for the new Outdoor and Area Lighting Service LED lamp sizes from the rate case to develop the currently proposed rates as shown in Table 2 below:

Table 2
Proposed New LED Lighting Rates

		Initial		Current	
		Proposed	Average	Proposed	
Lumens	Wattage	Rate [1]	Ratio	Rate	
10,000	≤71 watts	\$13.06	0.92	\$12.02	
24,000	≤184 watts	\$19.73	0.92	\$18.16	
43,000	≤316 watts	\$28.36	0.92	\$26.12	
[1] Docket 19-442; 11/1/2019 Initial Filing, Volume 3, redlined tariff sheets for Street and Highway Lighting Service.					

Calculations of the three proposed new LED lamp rates, using the same Lighting revenue requirement calculation methodology that was originally utilized in the Company's 2019 rate case,³ are provided as Attachment 1. The Lighting rate analysis incorporates the cost of purchasing, installing, and maintaining equipment along with the cost of providing electricity. The current proposed rates shown in Table 2 include a downward adjustment for each lamp, as described above, to reflect the lower Lighting class revenue requirements that were approved as part of the 2019 rate case resolution. These are all Option 1 rates, under which Minnesota Power owns, installs, and maintains all equipment necessary for providing lighting service.

B. Proposed Changes for Mercury Vapor Lighting

As Minnesota Power replaces lamps or convert fixtures, all Mercury Vapor fixtures are being replaced with other lamp types because of the growing environmental concern related to mercury in recent years. Furthermore, the Company no longer purchases Mercury Vapor bulbs. Therefore, Minnesota Power requests closing all Mercury Vapor rates to new customers in its Outdoor and Area Lighting Service, similar to Street and Highway Lighting Service that is already closed to new installations.

IV. CONCLUSION

The Company believes a modification to the Lighting Tariffs is in the public interest and provides additional service options that are desired by customers. Minnesota Power respectfully requests approval of its proposed modification of lighting rates.

³ Minnesota Power's 2019 rate case, Docket No. E015/GR-19-442, Volume 4, Rate Design Workpaper RD-1.

Dated: November 13, 2020

Respectfully Submitted,

A handwritten signature in black ink that reads "David R. Moeller". The signature is written in a cursive style with a large, prominent 'D' and 'M'.

David R. Moeller
*Senior Attorney and
Director of Regulatory Compliance*

**Outdoor Lighting Service
Rate Code 76**

Bulb Type	Light Emitting Diode	Light Emitting Diode
	LED184W	LED316W
	Rate Option 1	Rate Option 1
Lumens	23,797	43,098
Watt	184	316
Number of fixtures	0	0
Annual kWh per fixture	773	1,327

Investment

Conductor	49.50	49.50
Fixture - includes mast arm, ballast (non-LED), and lamp (LED)	\$436.67	\$809.45
Lamp - non-LED		
Light Installation	\$336.65	\$336.65
Photo Eye	\$14.20	\$14.20
<i>Subtotal</i>	<u>\$837.02</u>	<u>\$1,209.80</u>
A&G Expense	\$100.44	\$145.18
Material Handling Expense	\$83.70	\$120.98
Sales Tax	\$57.55	\$83.17
Total Investment	<u>\$1,078.71</u>	<u>\$1,559.13</u>

Annual Costs per fixture

Fixed Charges	\$114.34	\$165.27
Maintenance	\$61.49	\$88.87
Replacement - Fixture	\$21.83	\$40.47
Replacement - Materials - Photo Eye, Driver (LED), and lamp (non-LED)	\$2.12	\$2.12
Replacement - Labor Costs	\$14.43	\$14.43
Billing and Collections	\$2.00	\$2.00
<i>Subtotal</i>	<u>\$216.21</u>	<u>\$313.16</u>
A&G Expense	\$25.95	\$37.58
Total Annual Costs per fixture	<u>\$242.16</u>	<u>\$350.74</u>

Annual Energy Revenue Adjustment Factor per fixture *	-\$24.22	-\$37.35
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<u>Annual Revenue Requirement per fixture</u>	\$217.94	\$313.39
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<u>Monthly Revenue Requirement per fixture</u>	\$18.16	\$26.12
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* Adjustment factor to balance total allowed annual revenue requirements for Lighting class in 2019 rate case resolution.

Area Lighting Service
Rate Code 77

Bulb Type	Light Emitting Diode
	LED71W
	Option 1
Lumens	9,479
Watt	≤ 71
Number of fixtures	0
Annual kWh per fixture	298
 <u>Investment</u>	
Conductor	\$49.50
Fixture - includes mast arm, ballast (non-LED), and lamp (LED)	\$146.74
Lamp - non-LED	
Light Installation	\$336.65
Photo Eye	\$14.20
<i>Subtotal</i>	<hr/> \$547.09
A&G Expense	\$65.65
Material Handling Expense	\$54.71
Sales Tax	\$37.61
Total Investment	<hr/> \$705.06
 <u>Annual Costs per fixture</u>	
Fixed Charges	\$74.74
Maintenance	\$40.19
Replacement - Fixture	\$7.34
Replacement - Materials - Photo Eye, Driver (LED), and lamp (non-LED)	\$0.71
Replacement - Labor Costs	\$14.43
Billing and Collections	\$2.00
<i>Subtotal</i>	<hr/> \$139.40
A&G Expense	\$16.73
Total Annual Costs per fixture	<hr/> \$156.13
Annual Energy Revenue Adjustment Factor per fixture *	-\$11.88
<u>Annual Revenue Requirement per fixture</u>	\$144.25
<u>Monthly Revenue Requirement per fixture</u>	\$12.02

* Adjustment factor to balance total allowed annual revenue requirements for Lighting class in 2019 rate case resolution.

Inputs and Cost Allocations

A&G expense	12.000%
Area lighting only poles (MP owned)	1,566
Customer accounts revenue requirements per COS	\$40,851
Conductor (feet)	150
Conductor (\$ per foot)	\$0.33

Distribution pole cost	\$350.00
Energy charge rate adjustment factor (\$/kWh) *	-\$0.03134
Fixed charge rate - fixtures	10.60%
Fixed charge rate - distribution poles	10.37%
Hourly labor	\$70.88
Local Tax	2.000%

Replacement - Labor Costs

Vehicle Expense	\$45.00
Labor	\$212.64
<i>Subtotal</i>	<u>\$257.64</u>
A&G Expense	<u>\$30.92</u>
Total Replacement - LED & non-LED	\$288.56

* Adjustment factor to balance total allowed annual revenue requirements for Lighting class in 2019 rate case resolution.

kWh Calculations		<u>Old Code</u>	<u>Lamp Code</u>	11.50685	30.41666667	14.903	13.536	11.839	10.067	8.516	7.767	8.129	9.484	11.200	12.935	14.500	15.323
				Daily Est	Total kWh	January	February	March	April	May	June	July	August	September	October	November	December
<u>Burning Hours</u>						31	28	31	30	31	30	31	31	30	31	30	31
<u>Outdoor and Area Lighting Service - 76, 77</u>					4,200	462	379	367	302	264	233	252	294	336	401	435	475
<u>Light Emitting Diode</u>																	
Lumens	Watts																
10,000	≤ 71		LED71W	0.81698635	298	33	27	26	21	19	17	18	21	24	28	31	34
24,000	≤184		LED184W	2.11726040	773	85	70	68	56	49	43	46	54	62	74	80	87
43,500	≤316		LED316W	3.63616460	1,327	146	120	116	95	83	74	80	93	106	127	137	150

OUTDOOR AND AREA LIGHTING SERVICE

RATE CODES

Outdoor Lighting Service	76
Area Lighting Service	77

APPLICATION

To all classes of retail customers for outdoor lighting purposes (Rate Codes 76) and to persons other than governmental subdivisions for the purpose of lighting streets, alleys, roads, driveways and parking lots (Rate Code 77) subject to any applicable Riders. Rate Code 76 is not available on a seasonal or temporary basis.

RATE

<u>Lamp Type & Size</u> Sub rate code	CIS <u>Code</u>	Rate Per Lamp Per Month			
		<u>Option 1</u> __A	<u>Option 2</u> __B	<u>Option 3</u> __C	<u>Option 4</u> __D
Mercury Vapor Lamps			(Option 2 Closed to New Installation)	(Option 3 Closed to New Installation)	
Mercury Vapor Lamps (Closed to New Installation)					
7,000 Lumens (175 watts)	MV175W	\$11.77	\$8.23		
20,000 Lumens (400 watts)	MV400W	\$18.73	\$12.40		
55,000 Lumens (1,000 watts)	MV1000W	\$34.89	\$24.58		
Sodium Vapor Lamps					
8,500 Lumens (100 watts)	SV100W	\$10.32	\$5.96	\$5.96	
14,000 Lumens (150 watts)	SV150W	\$11.90	\$7.60		
23,000 Lumens (250 watts)	SV250W2	\$16.88	\$10.12	\$10.19	
45,000 Lumens (400 watts)	SV400W	\$22.60	\$14.89	\$10.81	
Metal Halide Lamps					
17,000 Lumens (250 watts)	MH250W	\$16.69			
28,800 Lumens (400 watts)	MH400W	\$20.33		\$12.05	
88,000 Lumens (1,000 watts)	MH1000W	\$33.87		\$22.00	
Light Emitting Diodes (LED)					
4,674 Lumens (48 watts or less)LED48W		\$9.00			
<u>10,000 Lumens (71 watts or less)LED71W</u>		<u>\$12.02</u>			

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David R. Moeller
Senior Attorney & Director of Regulatory Compliance

OUTDOOR AND AREA LIGHTING SERVICE

24,000 Lumens(184 watts or less)LED184W \$18.16
43,000 Lumens(316 watts or less)LED316W\$26.12

Pole Charge

Each pole used for service
under this schedule only

MPPOLE \$10.50 \$10.50 \$10.50

Monthly Service Charge	Included	Included	Included	\$3.34
Energy Charge - Per kWh	Included	Included	Included	5.990

Plus any applicable adjustments

ADJUSTMENTS

1. There shall be added to or deducted from the monthly bill, as computed above, a fuel and purchased energy adjustment determined in accordance with the Rider for Fuel and Purchased Energy Adjustment.

The monthly fuel and purchased energy adjustment per lamp shall be determined as the above fuel and purchased energy adjustment per kWh multiplied by the monthly kWh per lamp shown in the Energy Table below for the respective lamps.

2. There shall be added to the monthly bill, as computed above, a transmission investment adjustment determined in accordance with the Rider for Transmission Cost Recovery.

3. There shall be added to the monthly bill, as computed above, a renewable resources adjustment determined in accordance with the Rider for Renewable Resources.

4. There shall be added to the monthly bill, as computed above, a conservation program adjustment determined in accordance with the Rider for Conservation Program Adjustment.

5. There shall be added to the monthly bill, as computed above, an emissions-reduction adjustment determined in accordance with the Rider for Boswell Unit 4 Emission Reduction.

6. There shall be added to or deducted from the monthly billing, as computed above, a solar energy adjustment determined in accordance with the Rider for Solar Energy Adjustment.

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OUTDOOR AND AREA LIGHTING SERVICE

7. Plus the applicable proportionate part of any taxes and assessments imposed by any governmental authority which are assessed on the basis of meters or customers, or the price of or revenues from electric energy or service sold, or the volume of energy generated, transmitted or purchased for sale or sold.

8. Bills for service within the corporate limits of the applicable city shall include an upward adjustment as specified in the applicable Rider for the city's Franchise Fee.

PAYMENT

Bills are due and payable 15 days following the date the bill is rendered or such later date as may be specified on the bill.

BURNING SCHEDULE

Burning schedule is from dusk until dawn each night for a total of approximately 4,200 hours per year.

ENERGY TABLE

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OUTDOOR AND AREA LIGHTING SERVICE

Lamp CIS Code	Days Month		31	28	31	30	31	30	31	31	30	31	30	31
	Total		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Burning Hours	Daily Estimates	4,200	462	379	367	302	264	233	252	294	336	401	435	475
Monthly kWh usage per fixture by type														
MV175W	2	888	98	80	78	64	56	49	53	62	71	85	92	100
MV400W	5	1,932	213	174	169	139	121	107	116	135	155	184	200	219
MV1000W	13	4,620	508	417	404	332	290	256	277	323	370	441	479	523
SV100W	1	504	56	46	44	36	32	28	30	35	40	48	52	57
SV150W	2	756	83	68	66	54	48	42	45	53	60	72	78	87
SV250W	3	1,224	135	110	107	88	77	68	73	86	98	117	127	138
SV400W	6	2,016	222	182	176	145	127	112	121	141	161	192	209	228
MH250W	3	1,260	139	114	110	91	79	70	76	88	101	120	130	142
MH400W	5	1,932	213	174	169	139	121	107	116	135	155	184	200	219
MH1000W	12	4,410	485	398	385	317	277	245	264	309	353	421	457	499
LED48W	1	207	23	19	18	15	13	11	12	14	17	20	21	24
Monthly kWh usage per fixture by type														
MV175W	2	888	98	80	78	64	56	49	53	62	71	85	92	100
MV400W	5	1,932	213	174	169	139	121	107	116	135	155	184	200	219
MV1000W	13	4,620	508	417	404	332	290	256	277	323	370	441	479	523
SV100W	1	504	56	46	44	36	32	28	30	35	40	48	52	57
SV150W	2	756	83	68	66	54	48	42	45	53	60	72	78	87
SV250W	3	1,224	135	110	107	88	77	68	73	86	98	117	127	138
SV400W	6	2,016	222	182	176	145	127	112	121	141	161	192	209	228
MH250W	3	1,260	139	114	110	91	79	70	76	88	101	120	130	142
MH400W	5	1,932	213	174	169	139	121	107	116	135	155	184	200	219
MH1000W	12	4,410	485	398	385	317	277	245	264	309	353	421	457	499
LED48W	1	207	23	19	18	15	13	11	12	14	17	20	21	24
LED71W	1	298	33	27	26	21	19	17	18	21	24	28	31	34
LED184W	2	773	85	70	68	56	49	43	46	54	62	74	80	87
LED316W	4	1,327	146	120	116	95	83	74	80	93	106	127	137	150

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Senior Attorney & Director of Regulatory Compliance

OUTDOOR AND AREA LIGHTING SERVICE

Company shall furnish all electric energy required for service under this schedule.

EQUIPMENT OWNERSHIP, OPERATION AND MAINTENANCE

New Customer must select Option 1 or Option 4 only for each account served under this schedule.

Option 1

COMPANY TO OWN AND MAINTAIN:

1. The Company shall install, own, operate and provide normal maintenance to all equipment necessary for the above service including the Lighting Equipment beyond the point of attachment to Company's facilities consisting of, but not limited to, the fixture, lamp, ballast, photo-electric control and wiring.

Option 2

1. The Customer shall own all equipment for service under this schedule beyond the point of attachment with Company's pole or pad-mounted transformer. The equipment shall include, but not be limited to, the fixture, mounting bracket, lamp, ballast, photo-electric control and all minor materials. All customer-owned equipment must meet Company's specifications.

2. The Company shall install and operate all equipment necessary for service under this schedule and Company will own all equipment necessary for service under this Option, including poles, except for that equipment as specified in paragraph 1. All Customer owned Lighting Equipment will be installed at Customer's expense. The Company shall perform all normal maintenance on equipment necessary for service under this schedule and furnish and replace all burned out lamps and photo-electric controls Option 2 is closed to new installations.

Option 3

1. The Customer shall own, install and maintain all equipment necessary for service under this schedule beyond the point of attachment with Company's pole or pad-mounted transformer. The equipment shall include but not be limited to the poles, fixture, mounting bracket, lamp, ballast, photo-electric control and all minor materials. In addition, Customer must furnish and install a master disconnect switch at the point of attachment to isolate

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OUTDOOR AND AREA LIGHTING SERVICE

Customer's equipment from Company's electrical system. All Customer owned equipment must meet Company's specifications. Customer is responsible for providing lighting poles.

2. The Company shall own all equipment necessary for service under this Option except for that equipment as specified in paragraph 1. No maintenance will be provided by the Company on Customer owned equipment except as specified in a separate agreement. Option 3 is closed to new installations.

Option 4

CUSTOMER TO OWN AND MAINTAIN:

1. The Customer shall own, install and maintain all equipment necessary for service under this schedule beyond the point of attachment with Company's electrical system. The equipment shall include but not be limited to the poles, fixture, mounting bracket, lamp, ballast, photo-electric control and all minor materials. In addition, Customer must furnish and install a master disconnect switch at the point of attachment to isolate Customer's equipment from Company's electrical system. Customer's disconnect switch must meet Company's specifications. Company's point of delivery shall be on the Company's side of disconnect switch either at the weather head for overhead service or at the pad mount transformer for underground service.

2. Customer is responsible for all maintenance on all equipment beyond Company's point of delivery. Standard safety procedures followed by the Company on Company-owned lighting facilities shall be followed by Customer when maintaining its lighting equipment. Company reserves the right to disconnect Customer equipment from Company's electrical system if in the Company's opinion Customer's lighting equipment is operated or maintained in an unsafe or improper condition.

CONTRACT PERIOD

Six months, automatically renewable for six month periods unless canceled by 30 days written notice by either party to the other.

SERVICE CONDITIONS

1. Lights shall be located at sites designated and authorized by Customer. Customer shall provide in writing suitable right-of-way and right-of-occupancy for the facilities which the Company deems necessary to render service under the option chosen. The location shall be readily accessible to Company's equipment used for servicing and/or supplying service under the option chosen.

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OUTDOOR AND AREA LIGHTING SERVICE

2. Service will normally be from standard distribution facilities typical of those in the area surrounding the point of service. If it is necessary to provide non-standard distribution facilities, Customer shall pay Company for all costs in excess of standard facility costs.

3. Company will, at Customer's expense, relocate or change the position of any poles, circuits or lights owned by the Company as may be requested in writing and duly authorized by Customer.

4. For Area Lighting Service purposes, no more than four lights will be mounted on a single distribution pole used for other utility purposes. If more than one light is mounted on a single pole, Company's investment in additional facilities, over and above those which would be required for a single standard bracket mounting, shall not exceed \$15.00 per light. Additional required investment will be at Customer's expense.

5. Company shall provide as standard a service extension of up to the equivalent of one pole span to provide service under this schedule without cost to the Customer. No additional transformer capacity shall be provided as standard for Area Lighting Service. All necessary costs for providing service under this schedule in excess of standard costs shall be paid by Customer.

6. For lamps which satisfy the conditions as set forth in Options 1 or 2 under Equipment Ownership, Operation and Maintenance, Company will absorb the cost of replacing a lamp and photo-electric control devices damaged by a first act of vandalism at each location during each calendar year. In addition, Company will absorb the cost of replacing a lighting unit damaged by a first act of vandalism at each location during each calendar year if served under Option 1. All subsequent and other costs due to vandalism are at Customer's expense. For those locations served under Option 1 or 2, Company will repair equipment (not covered above) damaged by vandalism and will bill customer for appropriate costs.

SCHEDULE OF CHARGES

Applicable in conjunction with Service Conditions paragraph 6.

Labor and vehicle charges per the applicable rate as stated in the Company's Accounting Manual at the time the charge was incurred. Materials charges per the Company's cost for lighting replacement equipment plus the then current Material Handling Expense and A&G expense per Company's Accounting Manual.

Filing Date April 23, 2020 November 13, 2020 MPUC Docket No. E015/GR-16-664/E015/M-20-
429/E015/M-20-
Effective Date July 1, 2020 Order Date June 30, 2020

Approved by: David R. Moeller
David R. Moeller
Senior Attorney & Director of Regulatory Compliance

OUTDOOR AND AREA LIGHTING SERVICE

RATE CODES

Outdoor Lighting Service	76
Area Lighting Service	77

APPLICATION

To all classes of retail customers for outdoor lighting purposes (Rate Codes 76) and to persons other than governmental subdivisions for the purpose of lighting streets, alleys, roads, driveways and parking lots (Rate Code 77) subject to any applicable Riders. Rate Code 76 is not available on a seasonal or temporary basis.

RATE

<u>Lamp Type & Size</u> Sub rate code	CIS <u>Code</u>	Rate Per Lamp Per Month			
		<u>Option 1</u> __A	<u>Option 2</u> __B	<u>Option 3</u> __C	<u>Option 4</u> __D
Installation)			(Option 2 Closed to New New Installation)	(Option 3 Closed to	
Mercury Vapor Lamps (Closed to New Installation)					
7,000 Lumens (175 watts)	MV175W	\$11.77	\$8.23		
20,000 Lumens (400 watts)	MV400W	\$18.73	\$12.40		
55,000 Lumens (1,000 watts)	MV1000W	\$34.89	\$24.58		
Sodium Vapor Lamps					
8,500 Lumens (100 watts)	SV100W	\$10.32	\$5.96	\$5.96	
14,000 Lumens (150 watts)	SV150W	\$11.90	\$7.60		
23,000 Lumens (250 watts)	SV250W2	\$16.88	\$10.12	\$10.19	
45,000 Lumens (400 watts)	SV400W	\$22.60	\$14.89	\$10.81	
Metal Halide Lamps					
17,000 Lumens (250 watts)	MH250W	\$16.69			
28,800 Lumens (400 watts)	MH400W	\$20.33		\$12.05	
88,000 Lumens (1,000 watts)	MH1000W	\$33.87		\$22.00	
Light Emitting Diodes (LED)					
4,674 Lumens (48 watts or less) LED48W		\$9.00			
10,000 Lumens (71 watts or less) LED71W		\$12.02			

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24,000 Lumens (184 watts or less) LED184W \$18.16
 43,000 Lumens (316 watts or less) LED316W\$26.12

Pole Charge

Each pole used for service
 under this schedule only

MPPOLE \$10.50 \$10.50 \$10.50

Monthly Service Charge	Included	Included	Included	\$3.34
Energy Charge - Per kWh	Included	Included	Included	5.990

Plus any applicable adjustments

ADJUSTMENTS

1. There shall be added to or deducted from the monthly bill, as computed above, a fuel and purchased energy adjustment determined in accordance with the Rider for Fuel and Purchased Energy Adjustment.

The monthly fuel and purchased energy adjustment per lamp shall be determined as the above fuel and purchased energy adjustment per kWh multiplied by the monthly kWh per lamp shown in the Energy Table below for the respective lamps.

2. There shall be added to the monthly bill, as computed above, a transmission investment adjustment determined in accordance with the Rider for Transmission Cost Recovery.

3. There shall be added to the monthly bill, as computed above, a renewable resources adjustment determined in accordance with the Rider for Renewable Resources.

4. There shall be added to the monthly bill, as computed above, a conservation program adjustment determined in accordance with the Rider for Conservation Program Adjustment.

5. There shall be added to the monthly bill, as computed above, an emissions-reduction adjustment determined in accordance with the Rider for Boswell Unit 4 Emission Reduction.

6. There shall be added to or deducted from the monthly billing, as computed above, a solar energy adjustment determined in accordance with the Rider for Solar Energy Adjustment.

Filing Date November 13, 2020 **MPUC Docket No.** E015/GR-16-664/E015/M-20-429/E015/M-20-

Effective Date _____ **Order Date** _____

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OUTDOOR AND AREA LIGHTING SERVICE

7. Plus the applicable proportionate part of any taxes and assessments imposed by any governmental authority which are assessed on the basis of meters or customers, or the price of or revenues from electric energy or service sold, or the volume of energy generated, transmitted or purchased for sale or sold.

8. Bills for service within the corporate limits of the applicable city shall include an upward adjustment as specified in the applicable Rider for the city's Franchise Fee.

PAYMENT

Bills are due and payable 15 days following the date the bill is rendered or such later date as may be specified on the bill.

BURNING SCHEDULE

Burning schedule is from dusk until dawn each night for a total of approximately 4,200 hours per year.

ENERGY TABLE

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Lamp CIS Code	Days Month		31	28	31	30	31	30	31	31	30	31	30	31
	Daily Estimates	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Burning Hours		4,200	462	379	367	302	264	233	252	294	336	401	435	475
Monthly kWh usage per fixture by type														
MV175W	2	888	98	80	78	64	56	49	53	62	71	85	92	100
MV400W	5	1,932	213	174	169	139	121	107	116	135	155	184	200	219
MV1000W	13	4,620	508	417	404	332	290	256	277	323	370	441	479	523
SV100W	1	504	56	46	44	36	32	28	30	35	40	48	52	57
SV150W	2	756	83	68	66	54	48	42	45	53	60	72	78	87
SV250W	3	1,224	135	110	107	88	77	68	73	86	98	117	127	138
SV400W	6	2,016	222	182	176	145	127	112	121	141	161	192	209	228
MH250W	3	1,260	139	114	110	91	79	70	76	88	101	120	130	142
MH400W	5	1,932	213	174	169	139	121	107	116	135	155	184	200	219
MH1000W	12	4,410	485	398	385	317	277	245	264	309	353	421	457	499
LED48W	1	207	23	19	18	15	13	11	12	14	17	20	21	24
LED71W	1	298	33	27	26	21	19	17	18	21	24	28	31	34
LED184W	2	773	85	70	68	56	49	43	46	54	62	74	80	87
LED316W	4	1,327	146	120	116	95	83	74	80	93	106	127	137	150

Company shall furnish all electric energy required for service under this schedule.

EQUIPMENT OWNERSHIP, OPERATION AND MAINTENANCE

New Customer must select Option 1 or Option 4 only for each account served under this schedule.

Option 1

COMPANY TO OWN AND MAINTAIN:

1. The Company shall install, own, operate and provide normal maintenance to all equipment necessary for the above service including the Lighting Equipment beyond the point of attachment to Company's facilities consisting of, but not limited to, the fixture, lamp, ballast, photo-electric control and wiring.

Option 2

Filing Date November 13, 2020

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OUTDOOR AND AREA LIGHTING SERVICE

1. The Customer shall own all equipment for service under this schedule beyond the point of attachment with Company's pole or pad-mounted transformer. The equipment shall include, but not be limited to, the fixture, mounting bracket, lamp, ballast, photo-electric control and all minor materials. All customer-owned equipment must meet Company's specifications.

2. The Company shall install and operate all equipment necessary for service under this schedule and Company will own all equipment necessary for service under this Option, including poles, except for that equipment as specified in paragraph 1. All Customer owned Lighting Equipment will be installed at Customer's expense. The Company shall perform all normal maintenance on equipment necessary for service under this schedule and furnish and replace all burned out lamps and photo-electric controls Option 2 is closed to new installations.

Option 3

1. The Customer shall own, install and maintain all equipment necessary for service under this schedule beyond the point of attachment with Company's pole or pad-mounted transformer. The equipment shall include but not be limited to the poles, fixture, mounting bracket, lamp, ballast, photo-electric control and all minor materials. In addition, Customer must furnish and install a master disconnect switch at the point of attachment to isolate Customer's equipment from Company's electrical system. All Customer owned equipment must meet Company's specifications. Customer is responsible for providing lighting poles.

2. The Company shall own all equipment necessary for service under this Option except for that equipment as specified in paragraph 1. No maintenance will be provided by the Company on Customer owned equipment except as specified in a separate agreement. Option 3 is closed to new installations.

Option 4

CUSTOMER TO OWN AND MAINTAIN:

1. The Customer shall own, install and maintain all equipment necessary for service under this schedule beyond the point of attachment with Company's electrical system. The equipment shall include but not be limited to the poles, fixture, mounting bracket, lamp, ballast, photo-electric control and all minor materials. In addition, Customer must furnish and install a master disconnect switch at the point of attachment to isolate Customer's equipment from Company's electrical system. Customer's disconnect switch must meet Company's specifications. Company's point of delivery shall be on the Company's side of

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OUTDOOR AND AREA LIGHTING SERVICE

disconnect switch either at the weather head for overhead service or at the pad mount transformer for underground service.

2. Customer is responsible for all maintenance on all equipment beyond Company's point of delivery. Standard safety procedures followed by the Company on Company-owned lighting facilities shall be followed by Customer when maintaining its lighting equipment. Company reserves the right to disconnect Customer equipment from Company's electrical system if in the Company's opinion Customer's lighting equipment is operated or maintained in an unsafe or improper condition.

CONTRACT PERIOD

Six months, automatically renewable for six month periods unless canceled by 30 days written notice by either party to the other.

SERVICE CONDITIONS

1. Lights shall be located at sites designated and authorized by Customer. Customer shall provide in writing suitable right-of-way and right-of-occupancy for the facilities which the Company deems necessary to render service under the option chosen. The location shall be readily accessible to Company's equipment used for servicing and/or supplying service under the option chosen.

2. Service will normally be from standard distribution facilities typical of those in the area surrounding the point of service. If it is necessary to provide non-standard distribution facilities, Customer shall pay Company for all costs in excess of standard facility costs.

3. Company will, at Customer's expense, relocate or change the position of any poles, circuits or lights owned by the Company as may be requested in writing and duly authorized by Customer.

4. For Area Lighting Service purposes, no more than four lights will be mounted on a single distribution pole used for other utility purposes. If more than one light is mounted on a single pole, Company's investment in additional facilities, over and above those which would be required for a single standard bracket mounting, shall not exceed \$15.00 per light. Additional required investment will be at Customer's expense.

5. Company shall provide as standard a service extension of up to the equivalent of one pole span to provide service under this schedule without cost to the Customer. No additional transformer capacity shall be provided as standard for Area Lighting Service. All

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necessary costs for providing service under this schedule in excess of standard costs shall be paid by Customer.

6. For lamps which satisfy the conditions as set forth in Options 1 or 2 under Equipment Ownership, Operation and Maintenance, Company will absorb the cost of replacing a lamp and photo-electric control devices damaged by a first act of vandalism at each location during each calendar year. In addition, Company will absorb the cost of replacing a lighting unit damaged by a first act of vandalism at each location during each calendar year if served under Option 1. All subsequent and other costs due to vandalism are at Customer's expense. For those locations served under Option 1 or 2, Company will repair equipment (not covered above) damaged by vandalism and will bill customer for appropriate costs.

SCHEDULE OF CHARGES

Applicable in conjunction with Service Conditions paragraph 6.

Labor and vehicle charges per the applicable rate as stated in the Company's Accounting Manual at the time the charge was incurred. Materials charges per the Company's cost for lighting replacement equipment plus the then current Material Handling Expense and A&G expense per Company's Accounting Manual.

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STATE OF MINNESOTA)
) ss
COUNTY OF ST. LOUIS)

AFFIDAVIT OF SERVICE VIA
ELECTRONIC FILING

Tiana Heger of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 13th day of November, 2020, she served Minnesota Power's Petition in **Docket No. E015/M-20-XXX** on the Minnesota Public Utilities Commission and the Energy Resources Division of the Minnesota Department of Commerce via electronic filing. The persons on E-Docket's Official Service List for this Docket were served as requested.



Tiana Heger