

August 11, 2015

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Letter of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E-015/M-14-675

Dear Mr. Wolf:

On July 21, 2015, Minnesota Power filed a letter in the above-referenced docket requesting a modification to the wattages listed in Minnesota Power's Street and Highway Lighting Service tariff associated with light emitting diode (LED) fixtures that were approved in the Minnesota Public Utilities Commission's Order dated January 9, 2015. Minnesota Power indicated that it made this request because newer, more efficient LED equipment is now available and the manufacturer no longer produces lamps in the wattages reflected in Minnesota Power's tariff. With the expectation that wattages may continue to decrease, Minnesota Power proposed to modify its tariff as follows:

Light Emitting Diode (LED)

- 4,000 Lumens (54 watts or less)
- 8,800 Lumens (118 watts or less)

The Department requested information regarding any cost changes associated with the new lower-wattage lamps. Minnesota Power provided an explanation and spreadsheet (see Attachment 1). The Department notes that the initial cost of the fixtures increased, which results in higher annual costs when energy costs are excluded. However, the increased efficiency of the fixtures currently available results in a monthly savings on energy costs. The net effect is that Minnesota Power's monthly revenue requirement for the more efficient lamps is less than it would be if the cheaper, less efficient LED lamps were installed. Therefore, the Department recommends that the rates associated with the LED fixtures be amended to reflect the lower revenue requirement; that is, lower the rate for 54 watt or less fixtures from \$12.88 to \$12.74 per month, and lower the rate for fixtures between 118 and 54 watts from \$17.04 to \$16.60 per month. As indicated in Attachment 1, Minnesota Power agrees with this recommendation.

Finally, the Department notes that Minnesota Power's proposal introduces some ambiguity for the rate associated with fixtures of 54 watts or less given that those wattages are also covered by the phrase "118 watts or less." Therefore, the Department recommends the following language:

Light Emitting Diode (LED)

- 4,000 Lumens (54 watts or less)
- 8,800 Lumens (118 watts or less, but more than 54 watts)

The Department recommends that the Commission require Minnesota Power to modify its Street and Highway Lighting Service tariff as follows:

Light Emitting Diode (LED)

- | | | |
|---|---|----------------|
| • 4,000 Lumens (<u>54 watts or less</u>) | W | <u>12.7488</u> |
| • 8,800 Lumens (<u>118 watts or less, but more than 54 watts</u>) | Y | <u>167.604</u> |

The Department is available to answer any questions that the Commission may have.

Sincerely,

/s/ SUSAN MEDHAUG
Supervisor, Energy Regulation & Planning

SM/lt

Minnesota Power
LED Lighting Cost of Service
Street and Highway Lighting Service

DOC Attachment 1
Docket No. E015/M-14-675

Line No.			[a]	[b]	[c]	[d]
1	Fixture Type		LED	LED	LED	LED
2	Watt		45	54	99	118
3	Average Monthly kWh per Fixture		16.16	19.13	35.66	42.67
4	Number of Fixtures		1	1	1	1
5	Investment					
6	Fixture		\$257.61	\$239.00	\$360.87	\$326.00
7	Photo Eye		\$14.20	\$14.20	\$14.20	\$14.20
8	Mast Arm		\$85.00	\$85.00	\$85.00	\$85.00
9	Subtotal		\$356.81	\$338.20	\$460.07	\$425.20
10	Sales Tax	6.875%	\$24.53	\$23.25	\$31.63	\$29.23
11	Allocated Pole Investment Cost		\$9.38	\$9.38	\$9.38	\$9.38
12	Labor Light Installation	3.5 hours	\$310.42	\$310.42	\$310.42	\$310.42
13	Total Fixture Price		\$701.13	\$681.25	\$811.49	\$774.23
14	Material Handling Expense	5.60%	\$39.26	\$38.15	\$45.44	\$43.36
15	Conductor (150' of #6 Dplx)	150 \$0.290	\$43.50	\$43.50	\$43.50	\$43.50
16	Subtotal		\$783.90	\$762.90	\$900.44	\$861.08
17	A&G Expense	4.50%	\$35.28	\$34.33	\$40.52	\$38.75
18	Total Investment	Option 1	\$819.17	\$797.23	\$940.96	\$899.83
19	Annual Costs					
20	Fixed Charges	12.93%	\$105.92	\$103.08	\$121.67	\$116.35
21	Photo Eye Replacement - Materials		\$0.71	\$0.71	\$0.71	\$0.71
22	Driver Replacement - Materials 2/		\$0.71	\$0.71	\$0.74	\$0.74
23	Photo Eye Replacement - Labor		\$13.90	\$13.90	\$13.90	\$13.90
24	Driver Replacement - Labor 2/		\$1.39	\$1.39	\$1.39	\$1.39
25	Billing & Collections		\$0.18	\$0.18	\$0.18	\$0.18
26	Subtotal - Option 1		\$122.81	\$119.97	\$138.59	\$133.27
27	A&G Expense	4.50%	\$5.53	\$5.40	\$6.24	\$6.00
28	Annual Costs		\$128.34	\$125.37	\$144.82	\$139.27
29	Monthly Costs		\$10.69	\$10.45	\$12.07	\$11.61
30	Energy Rate (\$/kWh)	1/ \$0.1271641	\$2.05	\$2.43	\$4.53	\$5.43
31	Monthly Revenue Requirement		\$12.74	\$12.88	\$16.60	\$17.04

1/ In the Matter of Application of Minnesota Power for Authority to Increase Electric Service Rates in Minnesota
Docket No. E-015/GR-09-1151, Workpaper Vol IV, Lighting Cost of Service, Street and Highway Lighting Service (80,83,84)
RD-4-4, Energy Rev @ (\$/kWh)

2/ The manufacturer (GE) predicts that there will be 10% driver failure during the 20 years life span of the fixture