

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

**Northern States Power Company
Light Emitting Diode Streetlight Rate Petition
Tariff**

Case No. PU-15-692

**Order on Light Emitting Diode Streetlight Rate Petition and Tariff Revision
December 2, 2015**

Preliminary Statement

On October 15, 2015, Northern States Power Company (NSP) filed a request to modify the Company Owned Street Lighting System Service Rate Code D30 tariff schedule to add Light Emitting Diode (LED) lamp pricing options to its tariff.

On November 4, 2015, the Commission suspended the tariff and scheduled that the Company provide additional information on the request at an Informal Hearing on November 18, 2015.

The Company has three street lighting rate options for various wattage levels. With the first option (Rate D30), the Company owns all of the equipment, performs all maintenance, and provides energy distribution. The flat monthly charge includes the annualized investment, maintenance and operation costs to the Company for each fixture. Another option is for the cities to own the light fixtures themselves and have the Company provide maintenance and energy distribution service (Rate D31) for a flat monthly fee. Finally, the cities can choose to own and maintain their own lights and only pay the Company for energy (Rate D33). As an example, the cities own their decorative streetlight fixtures, which are typically located in downtown areas. This tariff change request only applies to the D30 cobra head style High Pressure Sodium (HPS) street light options where the Company owns and maintains the lights.

The Company indicated that a number of cities in North Dakota served by the Company support LED street lighting and in fact have changed some of their city-owned lights to LED already. Under the Company's proposed tariff, cities are not required to convert any of the Company-owned lights to LED lamps but, if the cities choose to convert, they would experience estimated savings of 3 to 6 percent on their bills. While the LED lights are slightly more expensive than the standard high pressure lights, savings result because the LED lights use less energy than the HPS lights. For example, while the fixed monthly charge to customers for a 39 watt LED fixture will increase \$0.19 per month compared to the existing charge for the 100 watt HPS fixture, they will see a decrease in energy usage and fuel costs that will more than offset the

fixed charge increase, resulting in an estimated monthly bill savings of about \$0.45 per fixture.

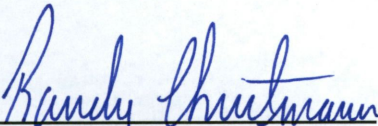
The LED streetlights use less energy yet they provide better lighting thereby enhancing security. Additionally, LED lights are better at directing the light downward which helps promote dark skies. The Company has conducted experiments with LED lights and has found the lights perform well in winter and citizen feedback indicates satisfaction with the brightness and appearance of the lighting.

The Company states that the HPS lamps last five to six years while the LED lights last 15 to 20 years. If all cities approve the conversion and the Company replaces all of its approximately 3,500 cobra head style HPS lamps over the next two years there will not be significant loss of useful lamp life because of the relatively short life span of the HPS lamps. The average cost to change out each lamp is \$216 for a total cost of just over \$750,000 assuming all lamps are changed out. The Company believes that changing out all the lamps at the same time is the most cost effective manner in which to make this change. The Company will inform the cities and media prior to the starting the conversion process.


Order

The Commission Orders the proposed tariff revisions are: APPROVED

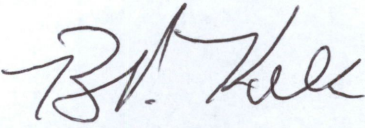
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