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December 30, 2015

**--Via Electronic Filing--**

Darrell Nitschke, Executive Secretary  
North Dakota Public Service Commission  
State Capitol Building, Dept. 408  
600 East Boulevard  
Bismarck, ND 58505-0480

RE: COMPLIANCE FILING  
ELECTRIC METERING AND TESTING TARIFF MODIFICATION  
CASE NO. PU-15-633

Dear Mr. Nitschke:

On August 10, 2015, Northern States Power Company, doing business as Xcel Energy, submitted a miscellaneous tariff filing to modify the meter testing language in the Company's North Dakota Electric Rate Book, NDPSC No. 2. On December 16, 2015, the North Dakota Public Service Commission issued its ORDER ON ELECTRIC METERING AND TESTING MODIFICATIONS TARIFF in the above-referenced case.

*Tariff*

Our compliance tariff sheets are attached as follows:

**North Dakota Electric Rate Book – NDPSC No. 2**

|                            |                            |
|----------------------------|----------------------------|
| Sheet No. 6-13, revision 2 | Sheet No. 6-14, revision 2 |
| Sheet No. 6-13.1, original | Sheet No. 6-15, revision 3 |

If you have any questions, please contact me at 701-241-8632 or [dave.sederquist@xcelenergy.com](mailto:dave.sederquist@xcelenergy.com).

Sincerely,

DAVID H. SEDERQUIST  
SENIOR CONSULTANT AND FINANCIAL CONSULTANT

Enclosures

## **SECTION 3 METERING AND BILLING**

### **3.1 METERING AND TESTING**

#### **Metering**

The Company will furnish, install, and maintain one set of metering equipment for each service location and rate schedule under which service is supplied. The location, number of meters and appurtenances, and specifics of installation will depend on the service arrangements and requirements of the rate schedules.

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#### **Customer Request for Meter Testing**

The customer may request a meter test. If the request to test a meter is made within one year of a previous meter test, a charge will be added to customer's bill if the metering equipment tests accurate in accordance with Commission standards. The charge will be waived if the meter error is more than plus or minus two percent.

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The Company will test an electric meter within ten calendar days of receiving a customer request to test a meter. In the event that the Company fails to investigate a potentially malfunctioning meter within this timeframe and the meter is later determined to be malfunctioning, the customer will not be rebilled for any discrepancy in the amount owed for service provided from the date the customer contacted the Company about their meter to the date the meter was investigated.

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#### **Meter Error**

In the event the Company's test shows meter error in excess of accepted or prescribed tolerance, the Company will adjust the bills for service during the period of registration error defined as one-half the time elapsed since the last previous meter test, but not to exceed six months. Adjustments shall be based on actual monthly consumptions.

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If the average meter error cannot be determined because of failure of part or all of the metering equipment, the customer shall pay an amount based upon registration of check metering equipment or an estimated amount based upon the customer's consumption for comparable operations over a similar period. Any adjustment because of metering equipment failure shall be from the date of the metering equipment failure, if known, or if not known, for a period equal to one-half the time elapsed since the last previous meter test, but not to exceed six months.

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(Continued on Sheet No. 6-13.1)

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|-------------|-----------|---|-----------------|----------|
| Date Filed: | 08-10-15  | By: Christopher B. Clark  | Effective Date: | 12-16-15 |
|             |           | President, Northern States Power Company, a Minnesota corporation |                 |          |
| Case No.    | PU-15-633 |   | Order Date:     | 12-16-15 |

**3.1 METERING AND TESTING (Continued)**

**Testing Process for New Electric Meters (Single Phase and Polyphase)**

New meters, whether single phase or polyphase, self-contained or transformer rated, are normally sample tested for accuracy when they are received from the supplier. The Company requires the meter supplier to provide certified test data for all new meters demonstrating the "as left" calibration for each meter is within the Company's accuracy requirements.

New transformer rated meter installations are also checked within sixty days of being energized and having customer load connected to ensure proper installation. This procedure is normally repeated if the current transformers and/or voltage transformers are replaced.

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**NORTH DAKOTA ELECTRIC RATE BOOK - NDPSO NO. 2**

**GENERAL RULES AND REGULATIONS (Continued)**

Section No. 6  
 2nd Revised Sheet No. 14

**3.1 METERING AND TESTING (Continued)**

**Testing Process for In-Service Meters**

In-service meters are either sample tested or tested annually depending on meter type as indicated in the following table:

| <u>Type of Meter</u>   | <u>Type of Testing</u> |
|--|------------------------|
| Self-contained single and polyphase  | Sample – yearly        |
| Transformer-rated single and polyphase   | Sample – yearly        |
| Transformer-rated polyphase meters in substations on primary services (services above 600V)      | Periodic – yearly      |
| Transformer-rated polyphase meters with demands greater than 1MW (during previous calendar year) | Periodic – yearly      |

1. Sample Testing Program

Meters to be sample tested on a yearly basis are placed in groups, or “lots.” ANSI C12.1 Electric Meters Code for Electric Metering is used to determine the sample size. The lots are defined based on the manufacturer, model type, and the industry standard test code. Each lot may be further separated into additional lots by individual or combinations of parameters such as serial number, purchase date, firmware revision, etc.

*ANSI/ASQ Z1.9 Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming*, is a sampling plan that specifies procedures by which an analysis of failures in a limited sample can determine the expected failure rate of an entire population. The Company uses tables from the ANSI/ASQ plan to evaluate the performance of in-service meters that have been grouped into lots for random sample testing. Testing is performed in accordance with ANSI/ASQ Z1.9, Inspection Level II with an acceptable quality level of 2.5 or better and specification limits of +/- 2%.

If a sample does not meet acceptance criteria, one of the options below will be employed:

- 1) If in the following year the lot sample does not meet acceptance criteria, the lot will be replaced over the next four years. Sample testing will continue during this removal period. If any subsequent sample tests meet acceptance criteria, the meter removal will be discontinued.
- 2) The lot will be separated by an additional parameter (e.g. serial number) and retested as multiple lots in the following year. If any subdivided lot does not meet acceptance criteria, it will be replaced over the next four years. Sample testing will be continued during this removal period. If any subsequent sample tests meet acceptance criteria, the meter removal will be discontinued.

(Continued on Sheet No. 6-15)

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**3.1 METERING AND TESTING (Continued)**

**Testing Process for In-Service Meters** (Continued)

As meters are tested in the sample testing plan, individual meters are calibrated – if their design permits – when the “as found” test results show an error greater than +/- 0.5% during either the full load or light load test. If the meter design does not accommodate calibration, the meters are removed and retired. Meters that require electronic reconfiguration due to their installation application will be individually re-programmed, calibration tested, and demand checked as appropriate. T  
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2. Periodic (Annual) Testing Program C

Meters that are on a periodic (annual) schedule may be tested and re-installed, tested and retired, or placed on a retirement list prior to their required test date based on the lot’s performance or other factors impacting the Company’s meter management decisions. As meters are tested in the periodic testing plan, individual meters are calibrated – if design permits – if the “as found” test results show an error greater than +/- 0.5% during either the full load or light load test. Otherwise, they are removed and retired. N  
Meters that require electronic reconfiguration due to their installation application will be individually re-programmed; calibration tested, and demand checked/tested as appropriate. C

**Testing Process for Reconditioned Meters**

Meters are retired if the “as found” test results show an error greater than +/- 0.5% during either the full load or light load test. Re-serviceable meters removed from a customer premise are reconditioned by cleaning, testing, and calibration prior to re-installation. C  
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**Verification of WH Accuracy of Meter Test Equipment** N

Shop WH test equipment are verified for WH accuracy monthly using a WH standard that is traceable to NIST (National Institute of Standards and Technology); this standard is verified annually for accuracy. N  
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