



414 Nicollet Mall
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September 10, 2018

—Via Electronic Filing—

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

RE: REPLY COMMENTS
2017 ANNUAL SERVICE QUALITY REPORT
DOCKET NO. E002/M-18-239

Dear Mr. Wolf:

Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy, submits this reply to the August 29, 2018 Comments of the Minnesota Department of Commerce in the above-referenced docket.

We appreciate the Department's thorough review of our annual report and its recommendation that the Commission accept our report and our proposed 2018 reliability goals. In Comments, the Department also recommended the Company provide information responsive to Ordering Paragraphs 3A-3H from the Commission's February 2, 2018 Order in Docket Nos. E002/M-16-281 and E002/M-17-249 on an on-going basis. We agree to the Department's recommendation and will include this information in future annual reports.

On pages 6-13 of the Department's comments, there is a discussion of Customer Average Interruption Duration Index (CAIDI) performance over the past several years. The Department acknowledges that "it can be difficult to balance improvement in CAIDI with fluctuations in [System Average Interruption Duration Index (SAIDI)] and [System Average Interruption Frequency Index (SAIFI)] performance." We agree with the Department's assessment, and believe it can be largely attributed to how CAIDI is calculated. Whereas, SAIDI and SAIFI measure how interruptions compare to total number of customers:

$$\text{SAIDI} = \frac{\text{sum of all customer interruption durations}}{\text{total number of customers served}}$$

$$\text{SAIFI} = \frac{\text{total number of customer interruptions}}{\text{total number of customers served}}$$

CAIDI measures how SAIDI and SAIFI compare to each other:

$$\text{CAIDI} = \frac{\text{SAIDI}}{\text{SAIFI}}$$

and therefore the relative speed at which SAIDI and SAIFI are improving influence the calculation of CAIDI.

The Department further noted that “SAIDI and SAIFI reflect Xcel’s system reliability, while CAIDI is more customer focused.” The Company agrees that CAIDI provides some insight into the length of an outage if a customer were to experience an outage. To that end, the Company utilizes CAIDI as an indicator when analyzing specific details of its response to outages because it provides value at a detailed analysis view. But because of the manner CAIDI is calculated, the Company believes it is a better metric of the relative speed of improvement of SAIDI and SAIFI, and is not a complete—or particularly good—picture of the customer reliability experience. The Company will continue to track and analyze CAIDI, but our expectation is CAIDI will likely not improve and perhaps degrade as the Company moves to eliminate many shorter duration outages through grid modernization such as the Fault Location, Insolation and Service Restoration (FLISR) program, leaving a higher percentage of longer outages.

As committed to above, the Company will continue to track CEMI and CELI and agrees with the Department that CEMI and CELI trends provide a good view of the customer reliability experience.

We have electronically filed this document, and copies have been served on the parties on the attached service list. Please contact me at 612-330-6935 or gail.a.baranko@xcelenergy.com if you have any questions regarding this filing.

Sincerely,

/s/

GAIL A. BARANKO
MANAGER, REGULATORY PROJECT MANAGEMENT

c: Service List

CERTIFICATE OF SERVICE

I, Carl Cronin, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

xx by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota; or

xx by electronic filing.

MPUC Docket No: E002/M-18-239

Dated this 10th day of September 2018.

/s/

Carl Cronin
Regulatory Administrator

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