

Staff Briefing Papers

Meeting Date February 1, 2018 Agenda Item *1

Company Xcel Energy

Docket No. **E002/M-16-281 and E002/M-17-249**

In the Matter of Xcel Energy's 2015/2016 Annual Safety, Reliability, Service Quality Report, and Proposed Annual Reliability Standards for 2017

- Issues
1. Should the Commission Accept Xcel Electric's Safety, Reliability, and Service Quality Reports for 2015 and 2016?
 2. Should the Commission accept Xcel's proposed annual reliability standards for 2017?
 3. Should the Commission require that the Company propose specific CEMI and CELI metrics in its next annual service quality report?

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 **Relevant Documents**

Date

Commission Order Accepting Xcel Energy's Report and Setting 2015 Reliability Standards, Docket No. E002/M-15-324

October 23, 2015

Xcel Energy's Initial Filing 2015 Safety, Reliability and Service Quality Standards Report. E015/M-16-281

April 1, 2016

Xcel Energy's Initial Filing 2016 Safety, Reliability and Service Quality Standards Report. E015/M-17-249

March 31, 2017

Comments of the Minnesota Department of Commerce Division of Energy Resources

August 31, 2017

Reply Comments of Xcel Energy

Sept 29, 2017

Response to Reply Comments Minnesota Department of Commerce

December 7, 2017



I. Statement of the Issues

1. Should the Commission Accept Xcel Electric's Safety, Reliability, and Service Quality Reports for 2015 and 2016?
2. Should the Commission accept Xcel's proposed annual reliability standards for 2017?
3. Should the Commission require that the Company propose specific CEMI and CELI metrics in its next annual service quality report?

II. Background

On April 1, 2016, Xcel Energy filed its 2015 annual safety, reliability, and service quality reports pursuant to Minnesota Rules, Chapter 7826. On April 14, 2016, the DOC informed the Commission that it lacked adequate resources to ensure careful review and analysis of the utilities' reports and requested an extension to file comments on the reports. . The utilities were allowed to maintain, through 2016, the reliability goals set for 2015. When the utilities filed their 2016 reports in April of 2017, the DOC's workload was anticipated to return to a more manageable level. As such, the DOC determined it would be was able analyze both the 2015 and 2016 reports in 2017. The Commission granted the DOC's request that the comment deadlines be extended to coincide with the comment deadlines that will be set for the utilities' 2016 reports that will be filed by April 1, 2017.

Reliability Report

Minnesota Rules part 7826.0500 require Xcel's reliability report to include, among other requirements:

- A. the utility's SAIDI for the calendar year, by work center and for its assigned service area as a whole;
- B. the utility's SAIFI for the calendar year, by work center and for its assigned service area as a whole;
- C. the utility's CAIDI for the calendar year, by work center and for its assigned service area as a whole;
- D. an explanation of how the utility normalizes its reliability data to account for major storms; and



- E. an action plan for remedying any failure to comply with the reliability standards set forth in part 7826.0600 or an explanation as to why noncompliance was unavoidable under the circumstances.

Recognizing that not all utilities would have the complete information required by the rules available for the first year the reports were due on April 1, 2003, the rules allowed for more limited initial reporting requirements. Utilities were required to file historical data and proposed reliability standards for SAIDI, SAIFI, and CAIDI, and the Commission established performance standards based on those initial reports.

Reliability Definitions:

SAIDI means the System Average Interruption Duration Index and measures the average customer minutes of interruptions per customer. It is derived by dividing the annual sum of customer minutes of interruption by the average number of customers served during the year.

$$\text{SAIDI} = \text{Total Customer Minutes of Sustained Outages} \div \text{Number of Customers}$$

SAIFI means the System Average Interruption Frequency Index and measures the average number of interruptions per customer per year. It is derived by dividing the total annual number of customer interruptions by the average number of customers served during the year.

$$\text{SAIFI} = \text{Total Number of Sustained Customer Interruptions} \div \text{Number of Customers}$$

CAIDI means Customer Average Interruption Duration Index and is measured by the average customer minutes of interruption per customer interruption. It approximates the average length of time required to complete service restoration.

$$\text{CAIDI} = \text{Total Customer Minutes of Sustained Outages} \div \text{Total number of Sustained Customer Interruptions} = \text{SAIDI} \div \text{SAIFI}$$

Interruption means an interruption of electricity service to a customer greater than five minutes in duration.

Major Service Interruption means an interruption of service at the feeder level or above and affecting 500 or more customers for one or more hours.

III. Parties' Comments

DOC: The Department continues to recommend that the Commission accept Xcel's filing in fulfillment of the requirements of Minnesota Rules, Chapter 7826, and the Commission's October 23, 2015 Order in Docket No. E002/M-15-324.

Additionally, the Department recommends that the Commission set Xcel’s reliability standards for 2017 as proposed by the Company:

Work Center		Recommended 2017 Goals
Metro East	SAIDI	89.13
	SAIFI	0.87
	CAIDI	102.42
Metro West	SAIDI	92.06
	SAIFI	0.89
	CAIDI	103.98
Northwest	SAIDI	95.88
	SAIFI	0.81
	CAIDI	118.45
Southeast	SAIDI	99.16
	SAIFI	0.74
	CAIDI	134.40

Finally, the Department continues to recommend that the Company propose specific CEMI and CELI metrics in its next annual service quality report.

Xcel: The DOC recommended Xcel propose specific Customers Experiencing Multiple Interruptions (CEMI) and Customers Experiencing Lengthy Interruptions (CELI) metrics in the Company’s next annual service quality report. The Company noted that it already report CEMI and CELI performance as part of the Company’s Quality of Service Plan (QSP) Tariff. There are nuances in the way that reliability indices can be calculated, and Xcel recognize that the DOC may want alternative views of the CEMI and CELI performance than the QSP Tariff presently provides.

Xcel indicated that it is open to further discussing with the DOC providing an additional view of the CEMI and CELI performance in these annual reports. However, Xcel acknowledge that on September 22, 2017, the Commission opened Docket No. E002/CI-17-401 to investigate, identify and develop performance metrics and potentially incentives for the electric utility operations, which may be a forum for additional discussion.

IV. Staff Analysis

While staff does not object to proposed CEMI and CELI metrics in Xcel’s next report, staff also notes that there is a wealth of information already in service quality reports and it is worth taking a fresh look at the existing data. Xcel’s principal service quality filing is already 120

pages, with Attachment D alone compiling an additional 1300 pages. Staff's priority for future service quality reports includes making the existing data available in different formats, for two reasons. First, members of the public or other community organizations at times ask the Commission for this data; staff would like to have some of this data available in formats that are understandable to the public. Second, staff plans to in the future request more quantitative data in spreadsheet format to be able to compile, sort, organize, and otherwise determine what the existing data may reveal.¹ There are likely many other opportunities to look at existing data in new ways, and management plans to add additional staff resources to the electric service quality reports filed in 2018.

None of staff's plans require a particular decision option nor do they conflict with the Department's recommendations.

Staff agrees with the recommendations of the DOC at page 11 of its December 7, 2017 filing and:

- accept Xcel's Safety, Reliability, service Quality Reports for 2015 and 2016;
- accept Xcel's proposed annual reliability standards for 2017; and
- require that the Company propose specific CEMI and CELI metrics in its next annual service quality report. However, staff would add the caveat that this be done only after consultation with the DOC.

V. Decision Options

1. Should the Commission Accept Xcel Electric's Safety, Reliability, and Service Quality Reports for 2015 and 2016?

- A. Accept Xcel's 2015/2016 Annual Electric Service Quality Reports.²
- B. Do not accept Xcel's 2015/2016 Electric Service Quality Reports.

2. Should the Commission accept Xcel's proposed annual reliability standards for 2017?

- A. Accept Xcel's proposed annual reliability standards for 2017.
- B. Do not accept Xcel's proposed annual reliability standards for 2017.

¹ As just one minor example, staff has been reviewing disconnection data.

² Staff recommends that the Commission clarify that its acceptance is based on using Xcel's proposed goals for 2016 as the standard for evaluating the Company's 2016 performance.

3. Should the Commission require that the Company propose specific CEMI and CELI metrics in its next annual service quality report?

A. Require that the Company propose specific CEMI and CELI metrics in its next annual service quality report after consultation with the DOC.

B. Do not require that the Company propose specific CEMI and CELI metrics in its next annual service quality report.